

103  
**IMPACT OF SAFE DRINKING WATER ACT REGULA-  
TIONS ON SMALL DRINKING WATER SYSTEMS**

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Y 4. G 74/7:W 29/4

Impact of Safe Drinking Water Act R...

**HEARING**  
BEFORE THE  
ENVIRONMENT, ENERGY, AND  
NATURAL RESOURCES SUBCOMMITTEE  
OF THE  
COMMITTEE ON  
GOVERNMENT OPERATIONS  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED THIRD CONGRESS  
SECOND SESSION

MARCH 14, 1994

Printed for the use of the Committee on Government Operations



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# CONTENTS

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	Page
Hearing held on March 14, 1994 .....	1
Statement of:	
Clark, B. David, director, drinking water division, Washington State Department of Health, Olympia, WA .....	39
Ellis, Wendell, owner and operator, Quail Creek Water System, Spicewood, TX .....	81
Guerrero, Peter F., Director, Environmental Protection Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office, accompanied by Ellen Crocker, senior evaluator; and Charles Bausell, senior economist .....	6
Levy, Steven, executive director, Maine Rural Water Association, on behalf of the National Rural Water Association .....	133
Olson, Erik D., senior attorney, Natural Resources Defense Council, Washington, DC .....	134
Perciasepe, Robert, Assistant Administrator for Water, U.S. Environmental Protection Agency, Washington, DC, accompanied by James R. Elder, Director, Office of Ground Water and Drinking Water .....	87
Smith, Velma M., Friends of the Earth, Washington, DC .....	119
Stanley, Kathleen M., executive director, Rural Community Assistance Program, Leesburg, VA .....	157
Synar, Hon. Mike, a Representative in Congress from the State of Oklahoma, and chairman, Environment, Energy, and Natural Resources Subcommittee: Opening statement .....	1
Letters, statements, etc., submitted for the record by:	
Clark, B. David, director, drinking water division, Washington State Department of Health, Olympia, WA: Prepared statement .....	42
Guerrero, Peter F., Director, Environmental Protection Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office:	
Information concerning the number of people who get their water from a well .....	33
Prepared statement .....	9
Olson, Erik D., senior attorney, Natural Resources Defense Council, Washington, DC: Prepared statement .....	137
Perciasepe, Robert, Assistant Administrator for Water, U.S. Environmental Protection Agency, Washington, DC: Prepared statement .....	91
Smith, Velma M., Friends of the Earth, Washington, DC: Prepared statement .....	121
Stanley, Kathleen M., executive director, Rural Community Assistance Program, Leesburg, VA: Prepared statement .....	159
APPENDIX	
Material submitted for the hearing record .....	171



# **IMPACT OF SAFE DRINKING WATER ACT REGULATIONS ON SMALL DRINKING WATER SYSTEMS**

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**MONDAY, MARCH 14, 1994**

**HOUSE OF REPRESENTATIVES,  
ENVIRONMENT, ENERGY, AND  
NATURAL RESOURCES SUBCOMMITTEE  
OF THE COMMITTEE ON GOVERNMENT OPERATIONS,  
Washington, DC.**

The subcommittee met, pursuant to notice, at 1 p.m., in room 2247, Rayburn House Office Building, Hon. Mike Synar (chairman of the subcommittee) presiding.

Present: Representatives Mike Synar and John L. Mica.

Also present: Representative William F. Clinger, Jr.

Staff present: Sandra Z. Harris, staff director; Sheila C. Canavan, professional staff member; Elisabeth R. Campbell, clerk; and Charli E. Coon, minority professional staff, Committee on Government Operations.

## **OPENING STATEMENT OF CHAIRMAN SYNAR**

Mr. SYNAR. The subcommittee will come to order.

Safe drinking water is one of our Nation's most precious privileges, and one that most Americans do not fully appreciate even having. Every time we turn on the tap, we blindly assume that the quality of our water is sound and free of contamination. But public health concerns associated with drinking water quality are actually quite high. In fact, this is an issue that goes to the heart of the whole debate over risk priorities. In a 1990 report, EPA's science advisory board rated drinking water contamination as one of its top five environmental concerns. Other studies have drawn similar conclusions.

Recently, serious drinking water emergencies in places like Milwaukee, Des Moines, and Washington, DC have made many skeptical as to whether government can indeed provide safe drinking water. Certainly, the funding we put toward this program is not reflective of the threat.

When compared to Federal funding for other lower priority environmental risks, like hazardous waste sites, Federal funds to carry out safe drinking water programs seem downright paltry. And, as we will hear today, States and local water systems are simply unable to make up the difference.

Some argue that the solution is not necessarily more money, but less regulation. When Congress passed the Safe Drinking Water

Act in 1974 we required EPA to regulate 22 contaminants, and gave the Agency the discretion to regulate any additional drinking water contaminants of concern. The Agency ignored that responsibility.

Between 1974 and 1986, EPA regulated only one additional contaminant, giving rise to considerable frustration in the Congress.

Predictably, in the 1986 amendments to the Safe Drinking Water Act, we reacted drastically by prescribing 83 specific contaminants for EPA to regulate, and requiring the Agency to regulate 25 additional contaminants every 3 years regardless of whether any public health risk existed to be addressed. In retrospect, the requirement on EPA to regulate 25 contaminants every 3 years seems arbitrary and not well thought out.

However, for Members who were not here at the time and who question the wisdom of our actions, I respectfully suggest that you simply cannot appreciate the enormous level of frustration Members experienced with EPA's recalcitrance on drinking water issues, as well as on a host of other important environmental issues. As evidence of the scope of that frustration, I would note that the 1986 act passed the House by voice vote, and the final conference report garnered only 21 votes in opposition.

But the climate at EPA has changed, and Congress should recognize that change. EPA has made several recommendations with respect to the act's upcoming reauthorization, including a risk based process for selection of contaminants to be regulated. Congress should give EPA's suggestions serious consideration.

Problems in implementing the Safe Drinking Water Act are especially acute for small water systems, and addressing the problems facing small systems is the reason we are here today. In 1990, GAO told this subcommittee that 90 percent of the noncompliance problems with the act were with small systems serving under 3,300 people. And that was before the 1986 amendments fully took effect; the problems have only gotten worse with every new requirement EPA puts out.

As a follow up to that hearing, I asked GAO to review the problems facing small systems, and to examine various approaches to improving small system compliance with the act. As we will hear today, GAO found problems in EPA's efforts to promote wider use of cost effective alternative technologies, such as packaged treatment plants or devices aimed at treating water as it enters the household or leaves the tap.

We will hear from an owner/operator of a small system that is using one of these alternative technologies. As I have said before, small systems don't need to pay for a Cadillac technology when they only need a VW Bug to fix their problems.

However, as GAO will testify, we need to teach our system operators how to properly operate and manage alternative technologies. That means requiring certification and training for water system operators, and that costs money.

GAO also found that the technical and financial assistance currently available to small systems is just not enough to meet the enormous needs experienced by the Nation's 52,000 community water systems. In some cases, GAO found that technical and finan-



cial assistance actually may encourage noncomplying systems to settle for a quick fix, instead of looking for a long-term solution.

The root problem seems to be that we simply have too many financially and operationally nonviable small systems.

GAO found that EPA has failed to create any incentives for systems to consolidate or restructure in order to attain financial or management solvency. In fact, until just recently, the amount of money available to States under EPA's own drinking water grants allocation formula was determined, in part, by the number of systems existing in a State which only discouraged consolidation.

We will hear today from a representative of Washington State which has been a leader in developing a program to ensure that small systems are financially viable and can meet the act's requirements. Solutions can range from physical restructuring or consolidation of nonviable small drinking water systems, to enhanced pollution prevention activities.

Undoubtedly the biggest problem facing the drinking water program is a chronic lack of resources at the Federal, State, and local level. EPA estimates that total compliance costs will reach \$1.4 billion annually by 1995. That figure doesn't include the costs of expensive upcoming regulations, such as the "disinfection by-products" regulation which is expected to cost another \$1.1 billion annually.

EPA estimates that small systems will bear 70 percent of the total compliance cost burden, even though these systems supply drinking water to only 10 percent of the population.

Folks, it can't be done. States can't keep up. Water systems can't keep up. Important pollution prevention programs designed to protect drinking water from contamination before it occurs are suffering as a result.

EPA has suggested establishing a drinking water State revolving loan fund to help systems meet the act's requirements. Congress has already appropriated the money.

But, as we speak, \$600 million is sitting in an account waiting for congressional authorization. The administration stands ready to add another \$700 million to that fund this year. We should not let this opportunity pass because of bickering over jurisdiction.

With respect to funds to administer the safe drinking water program, it is time for Congress to stand up and tell the truth. We can't punt all the tough calls to the States. It is time for us to admit that more Federal money is needed to carry out this program. It is time to make the tough decisions about adequately funding this program.

For those who advocate risk-based decisions, it's time to pony up the money. As people in Milwaukee, Washington, DC, and Des Moines will tell you, we simply can't stop regulating.

I look forward to hearing from today's witnesses and working with EPA and the other interested groups here today to pass a meaningful Safe Drinking Water Act reauthorization bill.

Joining me today is my favorite Republican, Bill Clinger, coming back for a guest appearance on this subcommittee.

Bill, glad to have you.

Mr. CLINGER. Thank you, Mr. Chairman.

I want to commend you for holding this hearing today on a subject that concerns each of us, the water we drink. We are all in agreement that it is critical that we have uncontaminated water and that we can assure citizens that their water is safe to drink.

However, the focus today is on small community water systems, something we know about since we represent small communities that have great difficulty and expense in meeting requirements that may not be critical to this assurance.

We find ourselves again asking the same questions about this program as we are with EPA's other environmental programs. Are we targeting scarce resources toward the highest risks? How can we alleviate unnecessary costs and burdens on society? Should we continue to spend billions of dollars on programs where the scientific benefits are unclear? How can we ease the burden for State and local governments in the implementation of these programs?

Unfortunately, the Safe Drinking Water Act is one of the most costly and burdensome environmental programs. As you know, the 1986 amendments require EPA to regulate 83 contaminants and a continuing requirement of no less than 25 new ones every 3 years, beginning in 1990. This means that communities are now forced to test for almost 100 contaminants, many of which never have been, and probably never will, be present in their water supply.

According to EPA's 1990 "Cost of Clean" report, national drinking water expenditures increased from \$800 million in 1972 to over \$3 billion in 1987. Costs are projected to increase to over \$6.5 billion by the year 2000.

Under the current requirements, many small local governments are going broke. The Safe Drinking Water Act penalizes small rural communities because they are forced to comply with the same requirements as urban areas, but in urban areas the fiscal pain is spread a lot further so that it is not as onerous.

In part, the problem stems from passing requirements that must be met by State and local governments without giving them adequate Federal dollars or providing flexibility. Over the years, this program has become more complex and difficult to implement, and currently there is a gap of over \$200 million which is unfunded for State implementation.

To bring this a little closer to home, I represent a rural district in northwest Pennsylvania. In my own district, the city of Franklin is paying nearly \$10,000 just in laboratory testing costs, excluding other labor costs, to test the water for its 13,000 citizens. The costs for the city have almost doubled since 1987. In addition, this small city is required to conduct the very same analyses as a city serving 100,000 persons, regardless of whether the area is at risk for the contaminant.

Mr. Chairman, if experience is the best teacher, I hope that these are lessons that Congress will remember when we reauthorize the Safe Drinking Water Act. We need to target scarce resources toward the highest risks, provide flexibility to State and local governments, and stop the "one size fits all" mentality. Perhaps most importantly, though, we in Congress cannot continue to "pass the buck" to State and local governments without really passing the buck.

Thank you, Mr. Chairman.

Mr. SYNAR. Thank you, Bill.

Mr. Mica.

Mr. MICA. Mr. Chairman, thank you. I made the mistake of reading all the background information, including the advanced copy of the GAO report, and I do want to say it is rather boring, but it does provide us with some of the background we need for this hearing.

I have to term this hearing, after reading all that, the title of this hearing is "Much Ado about Nothing" and the reason I title it that is that, first of all, Congress has done nothing to correct the situation as far as I can see; that is pointed out by the report.

Second, EPA has done little to address some of the problems. As far as Congress is concerned, you can regulate all you want, but if you don't provide the funds and assistance, it doesn't do much good, especially to the majority of the systems that this report addresses and this hearing will address that are noncompliant systems, and they are all small systems across the country of 500 or less.

So the Congress has done nothing. EPA has done very little to make funds or loans available, to make alterations in their mechanisms to assist small systems, both with technology and assistance, and also they have done very little to revise their grant formula that penalizes these small systems.

That is my observation about the hearing and I appreciate the report work that has been done and look forward to the testimony.

Thank you.

Mr. SYNAR. I thank the gentleman for his comments.

I might remind the gentleman that it is the purpose of this subcommittee to continue to pursue matters in a lengthy manner, not on a one-shot basis. You may think it is a lot to do about nothing, but for the 11 percent of communities that depend upon rural water systems, this is a lot to do about everything, which is the vital link to their future as a health issue as well as an economic development issue.

Mr. MICA. Mr. Chairman, to clarify my comments, it wasn't that we are doing nothing with the hearing, but it is that the hearing focuses on the Congress, which has done nothing, and the Agency that has done very little.

Mr. SYNAR. You are entitled to your misinformed interpretation.

Our first panel is Peter Guerrero, Director, Environmental Protection Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office. He is accompanied by Ellen Crocker and Charles Bausell.

As you know, it is the policy of the subcommittee, in order not to prejudice past or future witnesses, to swear all our witnesses.

Do you have any objection to being sworn in?

[Witnesses sworn.]

Mr. SYNAR. Thank you. Welcome.

First of all, let me take this opportunity to thank you on behalf of the subcommittee for your work in this area. It is very important. It keeps us informed with the type of information that I think Congress needs in order to make good decisions as we begin reauthorization of this very important act. We would ask you to summarize this report.

Under unanimous consent, your entire testimony will be made part of the record as well as the GAO report that you are issuing today.

**STATEMENT OF PETER F. GUERRERO, DIRECTOR, ENVIRONMENTAL PROTECTION ISSUES, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, U.S. GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY ELLEN CROCKER, SENIOR EVALUATOR; AND CHARLES BAUSELL, SENIOR ECONOMIST**

Mr. GUERRERO. Thank you, Mr. Chairman. We appreciate the opportunity to discuss the difficulties that small communities face in complying with this act.

Mr. Chairman, any doubts about the need for vigilance in protecting the Nation's drinking water were laid to rest last year following the dangerous outbreak of waterborne disease in Milwaukee and similar problems in New York and Washington, DC. These events, together with the long-term health risk of chemical contamination, reaffirm the responsibility and the challenges that water systems face every day in keeping our drinking water safe.

At the same time, it has become increasingly difficult for these systems to meet the Safe Drinking Waters Act's new and complex requirements. It has become especially hard for small public water systems, which often lack the necessary resources and technical expertise. According to EPA, it will cost small systems nearly \$3 billion through the end of this century to comply with these regulations, and that is over and above the \$20 billion that it will cost to make capital improvements. Several regulations now under development will further add substantially to this cost burden.

It will not be easy to balance the need to protect public health with the legitimate financial concerns of States, localities and the Nation's ratepayers. So we believe the problem will require a combination of strategies rather than a single solution.

Part of the solution lies in finding creative alternatives to improve compliance with EPA regulations. Part of the solution, however, requires a reexamination of the regulations themselves. Still another part of the answer lies in making better use of limited funds so we are buying the most public health protection with the dollars we have.

I would like to turn to the first of these issues, the need to find creative alternatives to improve compliance with EPA's regulations. Our findings on this issue are discussed in detail in the report being released today.

The GAO report examines various approaches for improving small systems compliance with the act including the use of affordable treatment technologies and creative strategies for providing technical and financial assistance to small systems. However, a number of factors limit the effectiveness of these strategies. For example, a lack of reliable cost and performance information about alternative technologies makes it difficult for State regulators to identify technologies that will satisfy treatment needs at an affordable cost. As a result, they are reluctant to approve these technologies.

The greatest problem, however, is the sheer number of systems that need assistance. Recognizing this, a number of States have sought to restructure the management or operations of small drinking water systems and to prevent nonviable systems from forming in the first place.

EPA has lent some support for these efforts by issuing guidance and conducting workshops. EPA also changed the method for allocating State grants for fiscal year 1994 to help remove disincentives for consolidating nonviable systems, although EPA has yet to adopt long-term changes to its grant formula.

But EPA has not effectively addressed the basic obstacle to restructuring efforts, which is the lack of State funds to carry them out. Our report recommended a number of things to address that problem. Specifically, we recommended that EPA revise the priorities it has set for States so as to place a greater emphasis on developing and implementing viability programs; that it develop a detailed and realistic funding strategy to implement those programs; and that it remove disincentives to consolidating water systems in the agency State grant formula.

Still, Mr. Chairman, while greater progress is needed in efforts to improve small system compliance with the Drinking Water Act, it has become increasingly apparent that we need to re-examine the requirements themselves, especially the newer ones associated with the 1986 amendments.

As high as compliance costs already are, they will rise higher. For example, the annual compliance costs for the first stages of the upcoming rule on disinfectants and disinfectant by-products will be \$1.1 billion. But more importantly, costs will continue to rise rapidly well into the future, since, as you pointed out, the act requires EPA to set standards for an additional 25 contaminants every 3 years.

Simply by virtue of their size and number, small water systems bear a disproportionately greater financial burden than large systems in implementing this law. On a per-household basis, the disparity between large and small systems can be dramatic. For example, EPA estimates that for water systems that exceed standards for synthetic organic and/or inorganic contaminants, such as metals and pesticides, the per-household costs for larger water systems increase \$210. This compares, however, to a \$1,500 per household cost increase for smaller systems.

States have also been severely affected by the growth in the program's requirements. As we reported in 1992, States are deferring or eliminating important responsibilities, devoting available resources instead to dealing with a growing list of regulations. Ironically, as we testified last year, some of the activities that are being deferred and are suffering the most, like State sanitary survey programs, are the ones with the most potential to avert future contaminant problems and reduce water systems' long-term compliance costs.

Mr. Chairman, we believe that at least in some of these cases the modification of the 1986 amendments could allow limited resources to be allocated to activities that are clearly important to the viability and effectiveness of State and local efforts to protect drinking water.

The requirement to regulate 25 more contaminants every 3 years without regard to relative risks that they pose may be a good candidate for change.

The final area I would like to touch on today deals with funds EPA has devoted to the drinking water program and the manner in which those funds are spent. As we have noted in the past, the funding of many State drinking water programs is woefully inadequate to meet program needs. In fact, many States readily acknowledge that their highest priorities aren't being adequately addressed.

EPA concedes the problem and has formally identified the program as a material weakness, a designation it reserves for programs that are unlikely to meet their objectives because of insufficient resources or other problems. Unfortunately, this acknowledgment has not been backed up by realistic budget requests.

Indeed, rather than the increase we would have expected to see in the current budget proposal, the Agency has proposed a decrease from last year's inadequate level of funding. Moreover, we believe the limited funds that are available for drinking water protection could be spent more effectively.

Specifically, EPA overemphasizes the treatment of problems at the expense of activities designed to prevent those problems or minimize those problems in the first place. In particular, greater emphasis is needed on those kinds of pollution prevention activities such as the wellhead protection program that you mentioned, a program which is designed to prevent contaminants from finding their way into underground water supplies, and other programs, such as the sanitary survey program, which are designed to identify and correct problems before they become worse.

As EPA has long acknowledged, near-term investments in preventive programs such as these can improve compliance and prevent much larger costs in the future.

This completes my statement. I appreciate this opportunity and will be pleased to answer any questions you have.

Mr. SYNAR. Thank you very much.

As always, you are very helpful.

[The prepared statement of Mr. Guerrero follows:]

United States General Accounting Office

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**GAO**

**Testimony**

Before the Environment, Energy,  
and Natural Resources Subcommittee  
Committee on Government Operations  
House of Representatives

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For Release  
on Delivery  
Expected at  
1:00 p.m. EST  
Monday, March 14, 1993

**DRINKING WATER**

**Combination of Strategies  
Needed to Bring Program  
Costs in Line With Resources**

Statement of Peter F. Guerrero,  
Director, Environmental Protection Issues,  
Resources, Community, and Economic  
Development Division



Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to discuss the difficulties small communities face in complying with the Environmental Protection Agency's (EPA) drinking water program. In 1986, the Congress amended the Safe Drinking Water Act to increase the number of regulated contaminants and strengthen EPA's enforcement authority. To implement these amendments, EPA issued new regulations that significantly increase the responsibilities involved in managing drinking water programs. To comply with EPA's revised regulations, small water systems--which make up 87 percent of all community water systems--must incur enormous costs and face difficult challenges.

Our statement today addresses three issues. First, we will review the efforts by EPA, the states, and other parties to help small water systems comply with the act and with the regulatory framework EPA has established to implement the act. Our findings on this issue are discussed in detail in our report, Drinking Water: Stronger Efforts Essential for Small Communities to Comply With Standards, which is being released by the Subcommittee today. Second, we will discuss a number of issues associated with this regulatory framework, such as the need to comply with new monitoring requirements and contaminant limitations, and the costs water systems are incurring to meet these requirements. Finally, we will discuss the implications of



these and related issues for the Congress as it once again considers amendments to the Safe Drinking Water Act.

In summary, Mr. Chairman,

-- The GAO report being released today examines various approaches for improving small systems' compliance with the act, including the use of (1) affordable, alternative treatment technologies and (2) creative strategies for providing technical and financial assistance to small systems. However, a number of factors limit the effectiveness of these strategies--particularly the sheer number of systems needing assistance. Accordingly, a number of states have increasingly sought to restructure the management or operations of small, nonviable systems, and to prevent nonviable systems from forming in the first place. However, EPA needs to take various steps to help ensure that states' viability programs succeed in improving small systems' compliance with the act.

-- While it is essential to improve the capacity of small systems to comply with the act's requirements, it has also become increasingly apparent that the spiraling costs associated with these requirements--particularly among smaller communities--must be examined by the Congress and the administration. The addition of

significant new requirements without a commensurate increase in resources has impaired the ability of states and communities to implement many of the fundamental program requirements that were in place before the 1986 amendments were enacted. The problem has had a disproportionately larger impact on smaller communities because they generally lack the economies of scale to absorb additional costs.

- Many of the problems facing small systems are indicative of those facing the drinking water program as a whole. We believe that as the Congress and the administration move to address these complex issues through the reauthorization of the Safe Drinking Water Act, they will need to pursue a combination of strategies rather than a single course of action. Specifically, an integrated approach is needed that (1) promotes the development of alternative and cost-effective compliance strategies, particularly for small systems; (2) reassesses whether regulatory modifications are warranted that could reduce cost burdens without compromising health protection; (3) provides the minimum funding levels needed to maintain the integrity of EPA's drinking water program, thereby reflecting the agency's stated policy of emphasizing activities associated with greater environmental and health risk; and (4) places greater emphasis in the

drinking water program on activities designed to prevent contamination problems from occurring in the first place.

Before elaborating on these findings, we would first like to provide a little background on the nation's drinking water program.

#### BACKGROUND

The Congress enacted the Safe Drinking Water Act in 1974 to protect the public from the risks of contaminated drinking water. This act required, among other things, that EPA establish (1) drinking water standards or treatment techniques for contaminants that adversely affect human health and (2) requirements for monitoring the quality of drinking water supplies and ensuring the proper operation and maintenance of public water systems.

The act also gave EPA the authority to delegate the primary responsibility for enforcing requirements of the drinking water program--commonly referred to as "primacy"--to states that meet certain requirements. To assist states in developing and implementing their own drinking water programs, the act authorized EPA to award grants to the states and directed the agency to help the states administer their programs. All states except Wyoming have assumed primacy for managing their drinking water programs. These states receive grants from EPA to help pay

for the oversight of water systems and other responsibilities.

In 1986, the Congress amended the act to, among other things, (1) establish deadlines to accelerate EPA's efforts to set standards, (2) establish a monitoring program for certain unregulated contaminants, (3) require EPA to issue criteria for determining which systems that rely on surface water must filter their water supplies, and (4) require all public water systems to disinfect their supplies. These new and more stringent requirements significantly increased responsibilities for providing safe drinking water at the federal, state, and public water system levels.

Meeting new and complex drinking water regulations has become increasingly difficult, particularly for small public water systems which often lack the resources and technical expertise needed to do so. In fact, 90 percent of community water systems that were found in violation of drinking water regulations in fiscal year 1991 were small systems (defined by EPA as systems with 3,300 or fewer customers). According to EPA estimates, it will cost small systems nearly \$3 billion through the end of the century to comply with all regulations, and an additional \$20 billion to repair and replace equipment and to expand the systems. Several regulations now under development could affect thousands of small water systems and be very expensive to implement.

ALTERNATIVE APPROACHES TO HELP SMALL SYSTEMS

These escalating costs are the driving force behind the recent efforts by EPA, the states, and others to develop new strategies to improve small systems' compliance. These strategies include (1) exploring whether alternative technologies can effectively treat drinking water at a cost affordable to small systems, (2) testing creative alternatives for providing technical and financial assistance to small systems, and (3) exploring options for restructuring small systems, such as consolidating small systems with larger systems that are better able to absorb costs.

Large systems usually have a customer base large enough to absorb the design, engineering, and capital costs of full-scale treatment facilities. Because small systems have fewer customers, the costs associated with constructing a full-scale treatment facility are generally prohibitive. Alternative technologies are available to remove contaminants from drinking water, and some small systems have successfully used these alternatives to meet their treatment needs at an affordable cost. One such alternative is the packaged treatment plant. Packaged treatment plants are systems that are preassembled in a factory, mounted on skids, and transported to treatment sites virtually ready to use. One small water system in Connecticut, serving approximately 3,000 people, saved \$1 million by installing two

packaged treatment plants instead of building a larger, full-scale treatment plant.

Technical and financial assistance for small community water systems is available from private, state, and federal sources. This assistance can help small systems correct deficiencies that cause violations of state or federal safe drinking water regulations. The American Water Works Association recently reported that \$100 million to \$200 million is being spent annually on technical assistance and training for about 75,000 small water systems.<sup>1</sup> In addition, for many years, the Farmers Home Administration has provided loans and grants to small, rural communities for financing the construction or improvement of community water and wastewater systems.

While technological innovation and technical and financial assistance can help some small systems, EPA and the states have increasingly recognized that the heart of the noncompliance problem lies in the sheer volume of small systems that are nonviable as presently structured and that have little chance of ever achieving compliance with the increasing number of drinking water regulations.<sup>2</sup> Accordingly, several states have turned

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<sup>1</sup>Waterweek, American Water Works Association, vol. 1, no. 5, Nov. 9, 1992.

<sup>2</sup>In general, nonviable water systems lack the technical, financial, or managerial capabilities to remain in long-term compliance with drinking water regulations.

toward restructuring strategies and viability programs to provide a more comprehensive solution. Restructuring is the adoption of management and/or ownership changes that provide nonviable systems with the financial, technical, and/or managerial capability needed to comply with drinking water regulations in the long term. One restructuring strategy involves consolidating a nonviable small water system with a larger, viable system that has a larger customer base and can better absorb costs. Such consolidation is sometimes impossible (particularly in the case of isolated systems in rural areas) but is nonetheless a worthwhile option in many cases.

State viability programs, in general, are designed to assess the viability of water systems and determine the best solution for bringing nonviable systems into compliance. State officials hope that such strategies will not only result in greater compliance, but will also help resolve their own financial crises by reducing the number of problem systems they must oversee.

#### FACTORS IMPEDING WIDER USE OF ALTERNATIVE STRATEGIES

We found that several factors prevent wider use of alternative treatment technologies by small drinking water systems. In general, a lack of reliable cost and performance information about alternative technologies makes it difficult for state regulators to (1) identify alternative technologies that

will satisfy treatment needs at an affordable cost and (2) grant approval of these technologies. Among other things, state regulators are concerned that some of the available alternative technologies are too complex for many small system operators to properly operate and maintain.

Although a wide variety of technical and financial assistance is, ostensibly, available to help small community water systems comply with federal and state requirements, the amount of assistance is extremely limited in comparison with the needs of small systems. Notwithstanding these resource limitations, state and industry officials told us that such assistance does not always address a system's long-term needs and, therefore, may actually perpetuate, rather than resolve, chronic noncompliance problems.

States have also experienced difficulties in using restructuring strategies and viability programs. Ironically, while these strategies offer states a promising way to help reduce their own long-term program costs, states lack the resources needed in the near-term to develop and implement these programs. The problem is compounded by the priorities EPA has set for the states' drinking water programs, which emphasize compliance monitoring, implementing new regulations, and other activities. Other problems complicating states' restructuring strategies and viability programs include (1) difficulties



obtaining the authority needed for such programs from state legislatures; (2) the lengthy time required for some restructuring efforts, particularly those involving hostile parties; and (3) EPA's drinking water grant formula, which generally allocates more funding to states with more water systems and can therefore serve as a disincentive to states that consolidate their water systems.

#### OVERCOMING BARRIERS HINDERING ALTERNATIVE APPROACHES

EPA is involved in various efforts to encourage wider use of alternative technologies. For example, the agency is (1) helping to assess the effectiveness of selected alternative technologies, (2) assisting in the creation of a centralized data base that will allow states and small systems to share information about drinking water technologies, and (3) assisting in efforts to develop standard protocols for the assessment and approval of alternative drinking water system technologies.

Nevertheless, given the large number of small community water systems, many federal, state, and industry officials agree that there will never be sufficient resources to provide the technical and financial assistance needed to bring all violating systems into compliance. Moreover, as EPA continues to develop new regulations required by the 1986 amendments to the act, small systems will soon be required to comply with requirements with

which their larger counterparts are already having difficulty.

Accordingly, EPA has focused attention on overcoming the difficulties preventing wider use of restructuring strategies and viability programs. For example, the agency has encouraged states, through guidance and workshops, to develop viability programs and restructure nonviable systems. EPA also changed the method for allocating state grants for fiscal year 1994 to help remove disincentives for consolidating nonviable systems-- although the agency has yet to adopt long-term changes to the grant formula.

EPA is also seeking new legislation that would further enhance restructuring and viability programs. In particular, the agency recently recommended that the Congress require states, as a condition of retaining primacy, to have both small system viability programs and the authority to direct nonviable drinking water systems to restructure. EPA also recommended that states be required to implement operator certification programs as a condition of primacy. The agency hopes this will help encourage wider use of certain restructuring strategies, such as contracting for operation and maintenance services and developing cooperative agreements to share these services. EPA has also proposed that the Congress establish a state fee program to help fund these and other state drinking water programs activities, although the agency has yet to develop the details of such a

proposal.

We acknowledge EPA's progress in addressing technological and managerial issues, particularly in light of the agency's own serious budget constraints, and agree that states should develop viability programs and acquire authorities needed to restructure nonviable systems. To be consistent, however, the agency still needs to address a number of problems to ensure the success of these restructuring efforts. Specifically, as we noted in our report, EPA needs to (1) revise the priorities it has set for states' drinking water programs to place greater emphasis on developing and implementing viability programs, (2) work with the Congress to ensure that its proposal to require that states develop viability programs is accompanied by a detailed and realistic funding strategy to implement these programs, and (3) remove disincentives to consolidating water systems in the agency's state grant formula.

#### IMPACTS OF ESCALATING PROGRAM COSTS

While greater progress is needed in efforts to improve small systems' compliance with drinking water requirements, it has become increasingly apparent that we need to reexamine the requirements themselves--particularly some of the newer requirements associated with the act's 1986 amendments. Specifically, we believe the act's reauthorization offers the

Congress and the administration a unique opportunity to reexamine the costs associated with some of the act's 1986 amendments and implementing regulations, and the unintended impacts these requirements may be having on the overall effectiveness of the program.

EPA recently estimated that total compliance costs will reach \$1.4 billion annually by 1995. This estimate only includes regulations that have already been promulgated; several regulations now under development, including regulations on radon and other radionuclides, disinfectants and disinfection by-products, groundwater disinfection, and arsenic, could affect thousands of small water systems and be very expensive to implement. For example, annual compliance costs for the first stage of the upcoming disinfectants/disinfection by-products rule are estimated to be approximately \$1.1 billion. Perhaps more important, program costs will continue to rise rapidly well into the future--as presently written, the act requires EPA to set standards for an additional 25 contaminants every 3 years.

Simply by virtue of their size and number, small water systems bear a disproportionately greater financial burden than large systems in implementing drinking water regulations. On a per-household basis, the disparity between large and small systems can be dramatic. For example, for water systems that have synthetic organic and/or inorganic contamination greater

than the maximum contaminant levels, EPA estimates that per-household costs for larger water systems will increase by about \$210 per year, as compared with up to \$1,500 per household for smaller systems serving populations of 100 or fewer. Overall, EPA estimates that nearly 70 percent of total compliance costs will be borne by small water systems, although these systems supply drinking water to only 10 percent of the U.S. population.

States have also been severely affected by the growth in the program's requirements, particularly since this growth has occurred without a commensurate increase in program resources. As we reported in 1992, states are deferring or eliminating important program elements, devoting available resources instead to developing and overseeing implementation of a growing list of contaminant regulations.<sup>3</sup> Ironically, many of the activities that have suffered the most, such as technical assistance programs, operator training and certification programs, and wellhead protection programs designed to prevent contamination of groundwater drinking supplies, are the ones with greatest potential to avert contamination problems and reduce water systems' long-term compliance costs.

Among the most important of these activities are comprehensive inspections called sanitary surveys. During a

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<sup>3</sup>Drinking Water: Widening Gap Between Needs and Available Resources Threatens Vital EPA Program (GAO/RCED-92-184, July 6, 1992).

sanitary survey, state officials may sample the water, inspect plant equipment, evaluate operators' capabilities, and assess numerous other vital aspects of plant safety and operations. Yet as we reported last year, many state program managers--while conceding that sanitary surveys are among the most vital elements of their program--are nevertheless cutting back on them in order to meet the new program requirements mandated by the 1986 amendments.<sup>4</sup>

The recent crisis at the Dalecarlia water treatment plant in Washington, D.C., illustrates how important these basic activities can be in preventing or minimizing major problems. As was the case in Milwaukee last year, the problem at the Dalecarlia plant involved a turbidity violation, a condition that can result in bacteria, viruses, or other pathogenic organisms entering the water supply. In the aftermath of the crisis, it became clear that many of its causes could be traced to deficiencies in the basic "nuts and bolts" needed to protect a system's drinking water: Operators were inadequately trained, operating procedures were poorly designed, and equipment was outdated. Many of these problems had been identified during a sanitary survey of the facility during 1991 but, according to EPA and plant officials, a shortage of funds prevented plant officials from correcting them.

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<sup>4</sup>Drinking Water: Key Quality Assurance Program Is Flawed and Underfunded (GAO/RCED-93-97, Apr. 9, 1993).

Our long-standing oversight of the drinking water program suggests that the budget problems cited by Dalecarlia officials are not unique. Moreover, we have found that many of the new responsibilities added to the program are being addressed at the expense of existing responsibilities--often to the detriment of the overall program. In at least some of these cases, modification of the 1986 amendments could allow limited resources to be allocated to activities that are clearly more important to the viability and effectiveness of state and local efforts to protect drinking water. The requirement to regulate 25 additional contaminants every 3 years, with little regard for the relative risks they pose, may well be a good candidate for such reconsideration.

MULTIFACETED APPROACH NEEDED TO PROTECT  
THE NATION'S DRINKING WATER SUPPLIES

Regulatory changes, however, are only a partial solution to the problems warranting the Congress's attention as it considers reauthorizing the Safe Drinking Water Act. The recent drinking water crises in Milwaukee and Washington, D.C. are sobering reminders of the importance of protecting drinking water supplies--and of the difficulty of doing so. As we recommended in a report issued last June, we believe that EPA and the Congress should work together to develop an integrated approach that addresses the need to bring the program's costs under

control, but which includes several other essential elements as well.<sup>5</sup>

First, EPA has made some progress in helping states and water systems find alternative and cost-effective strategies to achieve compliance (especially among small water systems), particularly in light of the agency's own budget constraints. However, as we noted earlier in this statement and in the report being released today, the agency needs to accelerate its efforts to deal with nonviable water systems by (1) revising the priorities it has set for states' drinking water programs to place greater emphasis on developing and implementing viability programs, (2) working with the Congress to ensure that its proposal requiring states to develop viability programs is accompanied by a detailed and realistic funding strategy to implement them, and (3) removing disincentives to consolidating water systems in the agency's state grant formula.

Second, as we have reported on several occasions in the past, EPA needs to work with cognizant committees of the Congress to identify the minimum funding levels needed to maintain the integrity of EPA's drinking water program, thereby reflecting the agency's stated policy of emphasizing activities associated with greater environmental and health risk. We believe this

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<sup>5</sup>Drinking Water: States Face Increased Difficulties in Meeting Basic Requirements (GAO/RCED-93-144, June 25, 1993)



assessment is particularly warranted in light of (1) the high levels of noncompliance and other problems identified in some of our more recent evaluations of this program and (2) the agency's own designation of the program as a "material weakness" under the Federal Managers' Financial Integrity Act--a designation the agency reserves for its most serious problems.

Third, we believe the drinking water program overemphasizes the treatment of problems detected, at the expense of activities designed to prevent or minimize problems in the first place. In particular, greater emphasis is needed on activities such as (1) the wellhead protection program, which is designed to prevent contaminants from finding their way into underground water supplies, and (2) sanitary survey programs, which are designed to identify and correct limited problems at the water system before they become larger problems affecting water quality. As EPA has long acknowledged, near-term investments in preventive programs such as these can improve compliance and prevent much larger cleanup costs in the long term.

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Mr. Chairman, this completes our prepared statement. We would be pleased to respond to any questions you or other members of the Subcommittee may have.

(160230)

Mr. SYNAR. I will recognize myself for 5 minutes.

The 1986 Safe Drinking Water Act amendments increased the number of regulated contaminants. Mr. Guerrero, tell us the rationale from that 1986 bill to get EPA to develop regulations for 83 contaminants within 3 years and for 25 contaminants every 3 years thereafter.

Mr. GUERRERO. That approach was in response to a lack of progress over the prior 12 years where the Agency had, when given discretion, only issued one standard.

Mr. SYNAR. There is a lot of talk today about cost benefits and focusing on our resources on the biggest risk in the environmental area. Is the drinking water contaminant a major environmental risk and should the public be concerned about it?

Mr. GUERRERO. EPA has estimated that the drinking water program is among the top 5 programs ranked according to risk—this was done in a 1990 science advisory board risk ranking procedures—and that the program merits additional resources.

As we saw last year in the outbreak in Milwaukee where 400,000 people became ill, the kinds of problems that can occur if drinking water is not adequately protected can be severe.

Mr. SYNAR. The 1986 bill added a lot of new costs particularly to small systems. What did you estimate that to be?

Mr. GUERRERO. We estimated that small systems will require about \$3 billion to the end of the century and that is in addition to the \$20 billion they will require to make capital improvements to improve their infrastructure.

Mr. SYNAR. We talked about the 1984 regulated contaminants, the 25 additional every 3 years. Do you think it is time to rethink those requirements?

Mr. GUERRERO. As I stated in my statement, Mr. Chairman, we believe that it is time to reexamine that requirement.

Mr. SYNAR. One of the suggestions that we hear from our small areas is regulating contaminants based upon occurrence in the drinking water. Do you think that is a better approach?

Mr. GUERRERO. We believe that clearly EPA does lack good occurrence data and needs to do a better job getting that data. We also believe that risk data is important to use in selecting contaminants for regulation.

Mr. SYNAR. It has been suggested by some that EPA could and should evaluate occurrence and health data extensively before regulating contaminants and then use cost-benefit analysis in setting the drinking water standards.

How would that differ from what we are doing now?

Mr. GUERRERO. Currently under the law, EPA sets a contaminant goal which is a risk-base goal at which no adverse health effects will occur. It then looks at the best available technology and is required by law to pick that technology that comes closest to achieving that goal. That then sets the standard, which is called an MCL.

In doing this, the Agency is allowed to take costs into consideration, but largely only looks at the costs of the best available technology for larger systems.

Under one proposal, EPA would take cost benefits into account presumably in setting the standard itself. It would not be required

to set that standard necessarily as close to the goal as it is now required to do.

Mr. SYNAR. We talked about the frustration in 1986 after 12 years of regulatory inactivity. Couldn't the Agency use this cost-benefit analysis as another excuse not to regulate?

Mr. GUERRERO. Given EPA's past track record, we have some concern that when the Agency has been given wide discretion to regulate it has left a lot to be desired. It is extremely important, in our view, given the early history of this particular program and the history of other programs such as FIFRA and TSCA—

Mr. SYNAR. But FIFRA and TSCA are not great examples of how cost-benefit analysis can be used because most of those substances have never been reviewed, have they?

Mr. GUERRERO. That is correct. As I have testified before you, Mr. Chairman, especially with regard to the FIFRA program, there has been very little result for two decades of effort.

Mr. SYNAR. Only 25 pesticides have been banned, is that right?

Mr. GUERRERO. That is correct. Another 25, in addition, have been voluntarily withdrawn, but EPA has only taken action on 25.

Mr. SYNAR. History has shown that when EPA has been left to make difficult regulatory decisions without explicit policy direction from Congress, delay and inaction have resulted. In fact, legal commentators describe this standard as basically "paralysis by analysis" because it takes so long for them to set standards and so few get done.

Is there any way to avoid this problem through the legislation which takes a cost-benefit approach to regulating contaminants?

Mr. GUERRERO. It is important in giving EPA additional instructions to use cost-benefit analysis that Congress also make an effort to decide certain basic policy considerations, such as answering how close to a health base goal should those standards be set.

Mr. SYNAR. One of the problems is that risk reduction benefits are hard to compute; we are probably in the infant stage of trying to determine this, aren't we?

Mr. GUERRERO. Yes. These are useful tools, but only as good as the quality and availability of data we have. On both sides of the picture, both benefit and cost data, there is a lot left to be desired.

Mr. SYNAR. You said that EPA had predicted \$1 billion per year to comply with the act. That figure is not very reliable, is it?

Mr. GUERRERO. That is correct. There are a number of assumptions that EPA made in coming up with those estimates, and they are probably understated. One key assumption involved the extent and use of monitoring waivers.

As we have heard from Mr. Clinger, monitoring can be an expensive element for many small systems and those waivers generally are not being used to the extent that EPA had anticipated.

Mr. SYNAR. One of the things I hear from Oklahoma small rural systems is the high cost of monitoring and testing for contaminants that don't show up in their water. I guess the natural question is, should water systems be allowed to tailor their monitoring and testing requirements to target contaminants that they are reasonably expected to find?

Mr. GUERRERO. Absolutely. Right now there is ability within the statute to tailor monitoring and to issue these waivers. They are

not being issued by States, by and large, and States are not being pressed to implement waiver programs and they don't have adequate funding to do so.

Mr. SYNAR. And that monitoring and testing shouldn't be divorced from pollution prevention and wellhead protection programs? It should all be tied together, shouldn't it?

Mr. GUERRERO. Yes. In fact, those waivers and exemptions can be a powerful incentive to move toward the protection side of the picture.

Mr. SYNAR. Mr. Clinger.

Mr. CLINGER. Following up on that, that was one of the questions I had with regard to the waivers. Do I understand that the reason only two States have applied for waivers in this area is because basically nobody is doing it anyway?

Mr. GUERRERO. The reason it doesn't happen is because the States have to put in place a program to grant those types of waivers and it takes resources away from other competing demands of the States programs.

Mr. CLINGER. So even though it saves money down the road, the initial investment to—

Mr. GUERRERO. That is right. It requires an upfront investment for a long-term benefit and the States are so hard pressed dealing with everything that is upfront today they don't have the resources to make those kinds of wise investments.

Mr. CLINGER. Do you think the waivers are a good idea though, a good approach? Should we make it easier for them—

Mr. GUERRERO. Absolutely. EPA had the experience in Wisconsin, where a half a billion dollar investment in that type of program has paid, in their estimate, some \$15 billion in benefits from monitoring waivers.

Mr. CLINGER. Following up on what you were discussing with the chairman, it seems that the enormous cost that we have involve small water systems, their inability to have the resources to do what is required under the Safe Drinking Water Act, as a result of the 1986 amendments, these amendments were passed out of a sense of frustration up here that we weren't getting results we had hoped for, so they were passed setting arbitrary figures on what number of contaminants ought to be looked at every year, and this really has put a tremendous burden on the States.

Should we consider, do you think at this point, providing some sort of different regulatory scheme for small water systems? How do you suggest we address this problem?

Mr. GUERRERO. EPA has proposed in their reauthorization package to look at a second tier of protection for small systems. I think we have to be extremely careful in moving in that direction.

First, I think we ought to caveat that with the notion that any such two-tiered protection system is temporary in nature, that it is targeted toward systems that are clearly viable and in the long run can conform and meet the act's requirements, and that the public is fully notified when this occurs.

When used very carefully and with those kinds of protections, it may have merits. It presents a challenge because it suggests a double standard.

Mr. CLINGER. It really comes down to economics where you apply the same standards to a very large population area, and obviously the pain is less than when you are applying it to communities like the chairman and I represent. You are inducing a lot of pain on small rural areas.

In your report, you criticize EPA for not emphasizing strong viable programs and for discouraging States, albeit inadvertently, from merging or consolidating drinking water systems. That was something that I had worked on some years ago to try to figure how we could create some sort of Fannie Mae approach to provide financing for small community drinking water systems and we were not able to do it.

You state that implementing viability programs can initially be resource intensive thus you are faced with the same problem, which is that the need for resources exceeds availability. How then can EPA responsibly encourage the development of viability programs if sufficient funding is unavailable?

Mr. GUERRERO. I think you have hit the nail on the head; it can't. I think in order for EPA to put clout behind its endorsement of these programs, it has to provide funding to States to design and implement those programs. Those programs have great merit.

There is about 50 percent of the small systems out there that are potentially candidates for restructuring to realize economies of scale and to reduce their costs through restructuring. It is a program with great merit and should be pursued, and it will require additional funding.

Mr. CLINGER. What is the breakdown? Do you have any idea how, what percentage of systems out there are privately, under private aegis and which are under public?

Mr. GUERRERO. It is about split half and half.

Mr. CLINGER. It seems to me that many of the smaller systems tend to be privately owned systems?

Mr. GUERRERO. I am not sure when you get to the smallest of the small what that distribution looks like, but for systems serving populations of less than 3,000, it is 50/50; 50 percent are publicly owned, 50 percent are private investor-owned.

Mr. CLINGER. Whether private or public, the taxpayer of the community has to pay for it?

Mr. GUERRERO. That is right. The ratepayers in that community will have to pay the cost to comply with the law.

Mr. SYNAR. Mr. Mica.

Mr. MICA. Thank you, Mr. Chairman.

The chairman has covered most of the cost-risk benefit analysis questions, so I will move to a couple of other areas.

The community water systems population that is served on page 13 of your chart, it looks like most of the problems are with the very small-size water systems, the noncompliance problems for small systems. Is that correct?

Mr. GUERRERO. Clearly the economies of scale here are an issue and most of the problems that are faced here in terms of costs, are costs to small systems and the smaller the system—

Mr. MICA. But most of the noncompliance problems are with the very small or small?

Mr. GUERRERO. Yes, sir.

Mr. MICA. Adding up the figures, you get close to 90 percent?

Mr. GUERRERO. That is correct.

Mr. MICA. The population served with a very large system, large system, medium-sized system, is about 90 percent of the country. There aren't as many problems for compliance in that area?

Mr. GUERRERO. That is correct.

Mr. MICA. What are the two things small systems lack? One is probably money and the other is technical assistance.

Mr. GUERRERO. They lack a number of things, trained and certified operators—

Mr. MICA. But money would solve that and technical assistance?

Mr. GUERRERO. They lack the resources to achieve compliance.

Mr. MICA. So it boils down to a question of money.

I serve on another committee that has authorized \$599,000 for a revolving fund. Nothing has been done with that. The money is appropriated; right?

Mr. GUERRERO. The money has been appropriated, not authorized.

Mr. MICA. That is right. So the money is here sitting in a revolving fund which would make money and technical assistance available, right?

Mr. GUERRERO. That would solve some of the problems, yes.

Mr. MICA. That is just the first year because it goes to \$1 billion and then on up to provide this assistance.

Mr. GUERRERO. I said that it would solve some of the problems because we know from work we have done on a similar State revolving fund for wastewater treatment that the smallest of systems have a hard time competing—

Mr. MICA. Your report says there are two areas that are lacking and one is congressional action, flexibility for small systems for compliance, and the other is funds or loans available that would assist them. Both of those need congressional action; is that correct?

Mr. GUERRERO. The lack of funding issue needs to be looked at—

Mr. MICA. Also the 1986 law the chairman spoke about. So those are the two focuses and Congress has done nothing or little about both.

As far as the Agency is concerned, there are two things that the agencies need to do. They need to provide alternatives, either technical assistance or revise their rules; is that correct?

Mr. GUERRERO. I would say that in providing the technical assistance, that is also something that Congress can be helpful with.

Mr. MICA. That is also money though. One of the things I have found in providing alternative filtration systems and technical assistance and all that, that is also money. They have spent some time and money doing this, but haven't come up with either a manual or with sort of the technical equipment to do the job; is that correct?

Mr. GUERRERO. That is right. EPA is just beginning to get cost and performance data out to smaller systems.

Mr. MICA. But they could change the rules and that could be done by the Agency.

The other thing you identified in your report is the grant formula. Some of the rules I guess deal with States, that the smaller

numbers of systems you have, the less money you get. So it works in contrary fashion to the urging of consolidation of some of the smaller nonviable systems, right?

Mr. GUERRERO. That is correct.

Mr. MICA. So that could be done by rule, too.

Mr. GUERRERO. No, that is something EPA can change—EPA can change its grant formula.

Mr. MICA. That is what I meant, within the Agency. Basically what we are talking about, we have covered most of the areas, by what Congress can do and what the Agency can do, and that is the conclusion of your report.

Mr. GUERRERO. There is one other important area, Mr. Mica, that I would urge also that the Congress look at, and that is the relative investment we make in what we call pollution prevention activities versus remedial kinds of activities, the wellhead protection program and those kinds of activities—

Mr. MICA. I didn't see the number of people served and would like to get it broken down more on the size of the system. You have 500 and above and below.

How many people are served in the country by individual wells? I have neighbors that are served by wells. I would like to see that number and how we protect those folks.

Ms. CROCKER. EPA does break down the system size categories and the populations served categories. I think there are 12 different size categories.

Mr. MICA. But you have no idea—is it 20 percent of the population, 30 percent of the population that gets their water out of a well?

Mr. GUERRERO. Out of individual wells, offhand, no, but we could ask.

[The information referred to follows:]

According to EPA, approximately 15% of Americans (40 million people) receive their drinking water from individually owned sources such as wells. Owners of these sources are solely responsible for the quality of the water provided.

Mr. MICA. That would be interesting because those people don't all get protected per se either. It would be my assumption that different jurisdictions have different enforcement.

I have property in a couple of places and I know you just drill a well and start pumping and drinking.

Mr. GUERRERO. The important thing to keep in mind here, is that 10 percent of the systems cover 90 percent of the population, so the protections that are in place are largely in place for most of the population.

Mr. MICA. Thank you.

Mr. Chairman, I yield.

Mr. SYNAR. Thank you, Mr. Mica.

The small water systems we are talking about were having problems with contaminant monitoring and testing prior to 1990 as was described in your last report. That was before Congress put in place the new requirements in 1986; is that correct?

Mr. GUERRERO. That is right.

Mr. SYNAR. It was Congress, not EPA, that required testing for 25 additional contaminants every 3 years, correct?

Mr. GUERRERO. That is correct.

Mr. SYNAR. We have asked small systems to pay for champagne solutions for beer problems. As you said in your testimony, we have asked small systems to build full-scale water treatment plants.

Describe if you would the alternative technologies which are available to these small systems to comply with the act.

Mr. GUERRERO. There are what are called packaged treatment systems that come out of a factory. They are shipped to a site, assembled and used in lieu of building a treatment plant on the site. There are also point-of-entry types of devices that are used at the point at which water comes into the unit, be it a residence or building, and there are point-of-use units on the tap itself.

These are the kinds of technologies available to help achieve compliance by smaller systems.

Mr. SYNAR. They are supposed to save money. Do they?

Mr. GUERRERO. By and large, they do. We have had examples in our work where systems have saved money, significantly so.

Ms. CROCKER. There is good news and bad news. One of the examples we found in Connecticut is where the system did install two package treatment plants instead of conventionally engineered systems and saved \$1 million, but even so, those package plants cost the community \$900,000.

Mr. SYNAR. These technologies do meet the drinking water maximum contaminant standards, don't they?

Ms. CROCKER. Yes.

Mr. SYNAR. How widespread are they in use?

Mr. GUERRERO. They are not widely used and part of the problem is the lack of performance and cost data. The equipment manufacturers are happy to provide that kind of data, but the States, by and large, look to an impartial source like EPA to verify the information and EPA needs to really play a larger role in that regard.

Mr. SYNAR. Has EPA developed a data base for small communities?

Mr. GUERRERO. They are starting that now. It is an effort that is needed. That kind of clearinghouse data base is something that was missing. EPA recognizes that and they are taking steps to develop it.

Mr. SYNAR. How long does it take companies that are in this business to conduct pilot tests on alternative filtration?

Mr. GUERRERO. Too long. It usually takes in excess of 6 months, but in one State, Ohio, the State agency required a 3-year pilot test, and then after the 3-year pilot test was over, it would allow for that system to be used only in the pilot location. It would not allow it to be used in other locations.

Mr. SYNAR. Because of that problem, the western States tried to make it easier to get alternative technology to small systems. It drafted a minimum uniform set of guidelines that all States could use in the technology. Did that work very well?

Mr. GUERRERO. It hasn't and for the same reasons. Some States have chosen to use it, some haven't and States are requiring costly and lengthy pilot testing programs that defeat the whole purpose of those types of protocols.

Mr. SYNAR. One thing you mentioned on why alternative technologies are important is that they are relatively simple to operate and maintain and they don't always require the certified or trained



operators that are capable of the larger technology. Does EPA require that small systems have trained and certified operators?

Mr. GUERRERO. Absolutely.

Mr. SYNAR. Have you estimated the cost?

Ms. CROCKER. We don't know how much it would cost. Most States—I believe 45 States already have mandatory operator certification programs—but a number of States also exempt small system operators, so it would be a matter of expanding existing programs.

Mr. SYNAR. But you would agree that the more certified and trained operators we have, the fewer violations of EPA's drinking water regulations would occur; correct?

Mr. GUERRERO. Yes.

Mr. SYNAR. Wouldn't fewer violations also result in reduced oversight costs incurred by the States and EPA?

Mr. GUERRERO. Yes, it would.

Mr. SYNAR. Don't States have operator and certification training requirements within their own States?

Mr. GUERRERO. Yes. There are 45 States that have those, but they tend to exempt smaller systems.

Mr. SYNAR. Now, your report mentions that in some cases technical and financial assistance is used as a quick fix and can act as a disincentive for small systems to seek long-term solutions to the problem. Is that correct?

Mr. GUERRERO. That is correct. There is quite a bit of concern from States we have spoken with that we have to be very careful in targeting those kinds of assistance, because if the systems are not viable systems, if they will not in the end come into compliance with the law, then that would result in wasted resources.

Mr. SYNAR. The real problem is that there are too many small systems out there that are not capable of complying?

Mr. GUERRERO. That is probably correct.

Mr. SYNAR. Your report mentions that some of the nonviable systems receive Federal funding for infrastructure improvements even though they will never be able to achieve long-term compliance goals, so in some ways we are wasting money, aren't we?

Mr. GUERRERO. That is right. We have to be very careful in targeting that limited assistance.

Mr. SYNAR. Has EPA told the States that developing viability programs is a top priority?

Mr. GUERRERO. No, it hasn't.

Mr. SYNAR. How much would it cost to get all the States to develop these viability programs?

Mr. GUERRERO. The estimate is \$5 million.

Mr. SYNAR. Mr. Clinger.

Mr. CLINGER. Thank you, Mr. Chairman.

Just a couple of other comments. Have you been able to make any judgment as to the performance of the various States; in other words, is there much variance in the ability of the States to oversee this program and implement the program? Do you find that some States have worse situations than others?

Mr. GUERRERO. Yes. There is some variation, in fact so much so that EPA is concerned about the possibility of certain States returning primacy for this program to EPA.

Mr. CLINGER. I understand because it all comes back to resources and the fact that States are under enormous pressure because of the resource problem, that perhaps as many as 30 States have at least explored the possibility of turning back primacy to EPA, and what would be the implications of that if suddenly EPA was going to be charged with running these programs for 30 States that suddenly turned back the jurisdiction to them?

Mr. GUERRERO. The number sounds high, but whatever the number is, even if it is a very small number, EPA would be very hard-pressed to run those programs.

Mr. CLINGER. Given all they have on their plate, then suddenly to be asked to implement a program that basically the States have been running, albeit with great difficulty and varying results, but suddenly to say to EPA you have to take charge again—

Mr. GUERRERO. That is why the EPA has come forward in their proposal asking for authority at the State level for user fees to help finance funds that would provide certain funding for those programs and ensure that, in the case the programs reverted back to EPA, there would be resources available to run them.

Mr. CLINGER. In what States does the Federal Government still maintain primacy?

Mr. GUERRERO. In environmental regulation?

Mr. CLINGER. No, this program.

Ms. CROCKER. Wyoming and the District of Columbia.

Mr. GUERRERO. We have seen with the District of Columbia this past year it has not been satisfactory—

Mr. CLINGER. Not terribly encouraging.

Thank you.

Mr. SYNAR. Mr. Mica.

Mr. MICA. In Milwaukee, people died from the water contamination or was—I thought at one point, I read as many as 30 or 40 people died.

Mr. GUERRERO. We have heard similar estimates.

Mr. MICA. Did they have a certified operator in Milwaukee?

Mr. GUERRERO. Yes. Milwaukee is probably one of the premier systems in the country.

Mr. MICA. Everybody got sick in Washington, DC, and they couldn't use the water. Does Washington, DC have a certified operator, too?

Ms. CROCKER. I believe they do.

Mr. MICA. That alone isn't going to solve the problem particularly for the—well, you have a lot of problems, it looks like—small system level and then you have also regulation that the Congress has imposed.

As I understand it, the contaminant that was in the Milwaukee and Washington water supply was not one of the ones that is mandated; is that correct?

Mr. GUERRERO. That is correct. EPA did not have very good occurrence data on that contaminant and chose not to regulate it and they made a wrong decision.

Mr. MICA. It is my understanding that certification of the POU and POE systems; is there any program within EPA for certifying those systems, point of entry and point of use?

Ms. CROCKER. When you say certification, do you mean independent evaluation?

Mr. MICA. EPA doesn't have any certifications that says this POU or this POE system is good?

Ms. CROCKER. No.

Mr. MICA. Would you recommend something like that?

Ms. CROCKER. We have in the past recommended that some of these—

Mr. MICA. So when people buy these little tapwater things that they put on the end and put little things underneath their sink and don't leave any room for the cleaning powder and all that, none of those systems are certified; it is sort of buyer beware?

Ms. CROCKER. Pretty much. There is a independent national testing organization, the National Sanitation Foundation International, which does certify systems, but it is at the option of the manufacturer.

Mr. MICA. What is it they do charge for certification—I saw a \$10,000 fee. Is that for package systems in the report?

Ms. CROCKER. I think it can range up to \$10,000.

Mr. MICA. Is that for package water treatment systems?

Ms. CROCKER. Yes.

Mr. MICA. So we do have that.

One of the other problems, as you said it took so long to approve these systems or test these systems. Is that identifiable to any particular delay? Is it because they are trying to test say climate factors over—maybe winter, spring, fall, sometimes you get a bad winter and there is a lot of ice and it flushes everything into the system; or is there a bureaucratic delay versus a technical analysis delay?

Mr. GUERRERO. I can't speak for the specific situation in Ohio, where it took 3 years, but I can say that the reason why it does take long in general is because there is a lack of cost and performance data, and if that—

Mr. MICA. I am sorry?

Mr. GUERRERO. There is a lack of cost and performance data on the systems, and if there were better information out there, I would be hopeful that States would be more willing to accept that data for its testing.

Mr. MICA. How many States have—I don't know if there is a technical term for this, but say a viable water—EPA evaluation structure in place? Is that the 45 you talked about? Or I heard another figure of 48 States could do certain things; where are our States on this?

How many States really have it together to make evaluations as to water quality—10, 20, 30, 40, 50 percent? 75?

Ms. CROCKER. I'm not certain. We looked at three States that are generally recognized as being most advanced.

Mr. MICA. So, you don't know, in fact, how many States can assume this responsibility?

Mr. GUERRERO. Well, it is an easy enough job to find out, as to how many States have viability programs.

Mr. MICA. And particularly for the small systems, say 100 users or 250 or 500, why not turn that totally over to the States with some general parameters from the Federal level?

I read how many thousands there are that serve 25. Would that make sense? Or am I—

Mr. GUERRERO. Again as we pointed out, the States differ widely in their ability to implement the Safe Drinking Water Act elements today. So not all States would be capable—

Mr. MICA. But if a State could, why not? Because we need another layer of Federal regulations?

Mr. GUERRERO. States generally lack certain authorities. One key authority they lack is the legal authority to require consolidation.

Mr. MICA. Why couldn't you also give the State, through Federal legislation, the authority to enforce and regulate?

Ms. CROCKER. That is one of EPA's reauthorization proposals.

Mr. MICA. And you have read the administration's proposals. And do you have any questions about any of these, or do you go along with the whole script?

Mr. GUERRERO. By and large, with the exception I cited, I think that those steps are in the right direction. They emphasize pollution prevention, and they emphasize a look at the regulatory structure of the program, and they emphasize financing. All are critical elements that deserve to be looked at.

The one area that I would caveat is the one area mentioned earlier today, that we have to be careful about creating a two-tiered structure of protection.

Mr. MICA. Are you familiar with the H.R. 3392, the Slattery-Bliely proposal?

Mr. GUERRERO. Yes, sir, I am.

Mr. MICA. And what is your comment just briefly on that?

Mr. GUERRERO. I believe that the use of cost and benefits in helping to make better-informed regulatory decisions is an extremely useful tool. The difficulty comes where EPA has been granted in the past discretionary authority to choose when to regulate.

Mr. MICA. Any other areas that—where you take question or differences? Pretty much in agreement?

Thank you, Mr. Chairman.

Mr. SYNAR. Let's correct the record here. With the exception of one State, all States basically have primacy over their water programs, do they not?

Mr. GUERRERO. Yes, they do.

Mr. SYNAR. Second, you told us in 1990—and the numbers are still consistent—that 90 percent of the systems that are not in compliance are small systems, is that correct?

Mr. GUERRERO. That is right.

Mr. SYNAR. And most, if not all of them, do not have trained or certified operators, do they?

Ms. CROCKER. I would say very many of them do not.

Mr. SYNAR. And it is your informed opinion, having followed this subject, that with more certified and trained operators, we do have better compliance with EPA and fewer violations; correct?

Mr. GUERRERO. Yes, sir.

Mr. SYNAR. If we fix all the things that we have talked about here today, the needs for States to evaluate alternative technologies, the need for operator certification and training, the need

to implement stronger viability programs; that would be placing more unfunded mandates on the systems, would it not?

Mr. GUERRERO. Not necessarily. I think we have to look at doing those kinds of things in conjunction with the other strategies we talked about earlier—the regulatory requirement for 25 every 3 years, the need to place greater emphasis on pollution prevention, the need to get alternative technologies in the hands of small systems.

Mr. SYNAR. But the bottom line is, if we fund all of those things, they are not unfunded mandates, are they?

Mr. GUERRERO. They certainly do need to be funded, and we pointed out that there is an imbalance between the existing requirements of the act and the funding resources available. So we would need to bridge that gap. Yes.

Mr. SYNAR. Mr. Guerrero, thank you very much. We would ask unanimous consent to enter other Members' questions in the record at this point. We would thank you and the GAO for the report that you have released. It has been extremely helpful as we continue to pursue the historical perspective, as we try to legislate this year's Safe Drinking Water Act.

Our next panel is Mr. David Clark, director of the drinking water program of the State of Washington and Mr. Wendell Ellis, an owner/operator of Community Water System from Spicewood, TX. Gentlemen, please come forward.

As you saw from the previous panel, in order not to prejudice past or future witnesses, we swear in our witnesses. Do you have an objection to being sworn?

Please raise your right hand.

[Witnesses sworn.]

Mr. SYNAR. Welcome. Mr. Clark, your entire testimony will be made part of the record and we ask you to summarize in 5 minutes, if you could.

#### **STATEMENT OF B. DAVID CLARK, DIRECTOR, DRINKING WATER DIVISION, WASHINGTON STATE DEPARTMENT OF HEALTH, OLYMPIA, WA**

Mr. CLARK. OK, I will try.

My name is Dave Clark, the director of the drinking water program for the State of Washington and the past president of the ASDWA, Association of State Drinking Water Administrators, so my views will reflect not only my experience as a State administrator, but also in that national organization.

What I would like to do is focus in on four areas very quickly—the small water system program that we have within the State, what we are doing on the issues that you have talked about and were addressed in the GAO report, about financial viability and what we are doing with small systems and, finally, alternative technology.

And then I would like to give you some views that we have in terms of the Safe Drinking Water Act, how it is being implemented and what we think needs to be done to correct some of the issues and problems that you have heard about. Before I start, though, I would like to just simply put things in perspective.

Within the State of Washington, we have a very serious concern about primacy and about maintaining primacy, and in my written testimony, you will note the several issues that have come up. This is kind of a banner year for us to take a look at the issue. Our legislature in its last legislative session in 1993 adopted a resolution expressing very serious concerns about the maintenance of primacy within the State and the unfunded mandates that were being imposed on the State, and sent that resolution to the Congress, as well as to the President.

We have also in the department, through our secretary, appointed a blue ribbon task force that we label as drinking water 2000 to look at the issue of primacy and whether or not the State should, in fact, maintain primacy, with the intent that a report will be prepared for our legislature for its 1995 session. We anticipate that that report will make a recommendation one way or the other in terms of whether or not we proceed to maintain primacy.

Now, dealing with the small systems, what I would like to do is give you a sense of what we are doing in the State just in terms of overall strategy, on how we are focusing on small systems. We have a significant number of small systems in the State, roughly 2,400 community water systems—of which roughly 80 percent of those systems have fewer than 100 service connections. The bulk of those systems are privately owned, in terms of homeowner associations, mobile home parks, other systems like that.

There are some investor owned and there are some small communities, but the bulk of the small systems that we deal with are, in fact, privately owned. Also, in that same category of systems, those less than 100 service connections, we do not require certified operators. This poses a problem, and I'm going to mention that when I talk about financial viability and other issues.

Our goal in terms of dealing with small systems is to assure viability, not to put systems out of business. And I would like to reemphasize that, because that was absolutely critical in terms of our success in convincing our legislature and other stakeholders within the State that we ought to have a financial viability program.

There is extreme concern among small communities that the State is going to come in and restructure their lifestyle. Many of them have chosen the lifestyle to be in rural areas, small community areas, and they don't want to have government coming in and restructuring how they conduct their life.

So the issue that we had to address in getting our authorities and proceeding with that program was to deal with the concept of viable systems to meet drinking water standards to provide safe, reliable water, rather than restructuring. So our goal is clearly viability.

In meeting this objective we focus both on the prevention of new nonviable systems as well as improving compliance with existing systems.

We have also focussed on developing a partnership with local governments and utilities in terms of dealing with the issue.

The viability program itself has 10 elements to it with the cornerstone and the foundation based on our planning program. We have extensive authority to require water utilities to develop comprehensive water utility plans, looking ahead long term, 20 years,

with specific short-term plans for 6 years. They are required to develop and submit these plans to the State for review and approval. Financial viability and financial planning is a key element of that water system plan. We also have what we call a financial viability assessment which is a test that we have just recently developed. We are asking water systems to conduct this test which is more for their information and to assist them in determining whether or not they have a rate structure that can adequately cover the cost that it is going to take them to maintain their systems.

We have an operating permit program. Every public water system in the State that is under the Federal definition is required to have an annual operating permit from the State to operate. We use that operating permit to assess the viability of the system and the adequacy of the system; but we also use it as a way to raise fees, so it serves dual purpose.

We have a satellite system management program. And this is critical when I get into the viability part of it, because you have to have a safety net. You have to have some way to deal with those systems that have been determined to be nonviable. You have got to have a way to deal with it other than physically restructuring.

So satellite management is a key element of our program. And this is simply a structure that allows the State to certify utilities who are willing and capable of taking over and operating failed systems or systems that need to be upgraded. They do this by either taking them under ownership or under a contract operation.

We have a growth management act that was enacted to deal with serious problems with growth in the State over the last 10 years. We have seen a tremendous increase in population that has created significant burdens on the infrastructure that we have. As a result of that, the State passed a very comprehensive growth management act which deals with the whole issue of planning and land use controls. We have a mandatory operator certification program. That program only deals with those systems less than 100 service—only deals with those over 100 service connections unless it is surface water.

The basic problem that I have seen with the financial viability program—and I wanted to highlight that, and it is something that I think you need to consider when you are considering the Federal Safe Drinking Water Act—is that it took us 5 years to develop this program. It took us 5 years to go through the process of convincing State government and local government and other folks that we needed to deal with this as an issue. We also implemented the program without any Federal mandate. We did that because the problem was there and the issue was there. And we took the responsibility to take that to our State legislature and other folks to give us that authority to deal with the problem.

We structured our financial viability program around the social and institutional structure that we had within the State, and it deals with the issues that deal with the growth; but it is specifically oriented and tailored to deal with the problems that we have in the State of Washington, and I think those are extremely important concerns.

Mr. SYNAR. Thank you.

[The prepared statement of Mr. Clark follows:]

Testimony Before the  
Subcommittee on Environment, Energy and Natural Resources  
House Committee on Government Operations

Presented by:  
B. David Clark, Director  
Division of Drinking Water  
Washington State Department of Health

March 14, 1994



Testimony of B. David Clark, March 14, 1994

Chairman Synar and members of the Subcommittee. My name is David Clark, and I am the Director of the Division of Drinking Water in the Washington State Department of Health. I am happy to be here today at your request to discuss the Drinking Water Program in the State of Washington, and particularly those aspects related to our Small System Strategy, including assessment of the financial viability of a system. I am also happy to share with you my views on the Safe Drinking Water Act, both as to its current implementation by the Environmental Protection Agency, and under prospective changes to the SDWA that have been offered by a variety of groups. Some of those changes are embodied in legislation currently pending before other committees, including HR 3392—the "Coalition" bill that was developed and is supported by a number of groups including the National Governors' Association and the Association of State Drinking Water Administrators, of which I am the immediate past President.

The whole question of the Safe Drinking Water Act, its impact on the states, and the willingness or ability of states to continue their "primacy" for administration of the Act has gained a high level of visibility in Washington, and generated significant concern. During its 1993 session, the State Legislature passed Senate Joint Memorial 8021, which formally petitioned President Clinton and the Congress to thoroughly review the SDWA and its impact on states, and provide the necessary changes and resources to relieve the burdens that the states are now facing. A copy of that measure is attached. Last year as well, the Secretary of the Washington Department of Health appointed a high-level Drinking Water 2000 Task Force, whose principal focus is to identify the impacts of SDWA primacy on Washington, evaluate alternatives, and determine whether the state should continue to maintain primacy in the face of mounting federal demands and declining federal resources. The Task Force report is due this December, and will significantly shape the debate over the value of maintaining primacy to the people of Washington.

I want to focus in my oral testimony today on small system issues relevant to the State of Washington. However, I want to submit for the record some additional written material elaborating on some of our efforts in Washington that may be useful to the Subcommittee, which I have appended to my written remarks.

I also want to note that I am not necessarily speaking for the State of Washington on these issues. However, my views reflect 13 years experience in the administration of drinking water programs in both Washington and California, as well as other experience in water quality programs while working for the EPA in the western United States. They also reflect the information that I have picked up within the past three years as an officer with ASDWA, which represents all 50 states and their drinking water programs.

#### Background

Let me first outline for you some basic facts with regard to Washington's public water systems. Although Washington's situation does not necessarily represent all Western states, it does typify the problems associated with small systems in West.

- Washington state has over 60,000 square miles of land area, divided into 39 counties; county governments are responsible for the major land use and construction decisions.

Testimony of B. David Clark, March 14, 1994

- We have just under 5000 public water systems subject to the Safe Drinking Water Act, of which about 2400 are "community" water systems providing supplies to residential customers. We also have another 10,000 or so smaller water systems, with two to ten connections, required by Washington law to meet certain minimum health and design standards.

- The three major metropolitan systems—Seattle, Tacoma, and Everett—supply water, either directly or wholesale, to about two-thirds of the water system customers in the state.

- Of the 2400 or so community water systems subject to the SDWA, all but 170 are characterized by the EPA as "small" (i.e., have fewer than 1000 connections), and over 90% utilize groundwater as their principal supplies.

- Of these 2200+ small systems, three-quarters (about 1650) have fewer than 100 connections.

- Over 90% of the small systems are in non-public ownership (i.e., they are owned by homeowners associations, mutuals, cooperatives, or for-profit utilities). State constitutional provisions restrict the use of state funding programs to finance capital improvements for these privately-owned systems.

- From 1982 to 1992, the number of small water systems (from two to 100 connections) increased from 5700 to approximately 11,800; in 1993 alone, the number of state-regulated systems (from two to ten connections) increased by over 1300.

- State law requires certified operators only for water systems with 100 or more connections, or that have treatment facilities.

- Small water systems have over 90% of all monitoring and water quality violations in the state; of these, nearly 70% are for failure to monitor, and only two percent for an acute water quality violation (immediate health risk).

As the administrator of a state program, I can draw some simple conclusions from these facts:

(1) In the State of Washington, over 90% of the community systems subject to the SDWA are, by EPA definition, "small systems," yet EPA's regulations implementing the SDWA are designed by EPA for implementation by large, municipal systems, which inevitably creates enormous technical and managerial burdens both for small systems and for state programs responsible for enforcing the Act.

(2) While the areas around Puget Sound are becoming highly urbanized, most of Washington remains rural. In those areas, small systems are the only alternative to individual wells, and rigid limitations on such systems (e.g., proposed bans under the SDWA of new "nonviable" systems) will result in either extreme land use controls or creation of even smaller water systems to evade the jurisdictional size minimums of the SDWA.

(3) The majority of the state's population, served by the major municipal water systems, are receiving safe and reliable supplies.

Testimony of B. David Clark, March 14, 1994

### Small Systems and Financial Viability

The Drinking Water Program in Washington has long recognized the "small system problem" as probably the single greatest challenge facing the program, and has spent a number of years addressing it. It has been the focus of a year-long statewide study by a broad-based task force that produced a report with extensive recommendations in 1990. A similar report was produced for the Legislature in 1991. Legislation has been developed and adopted addressing satellite system management, financial viability, and minimum operating permit requirements. Administrative regulations have been adopted, and more are under consideration, to implement planning and operational requirements. Interagency agreements have been developed with other state and local agencies with parallel or overlapping regulatory authority over small systems. Reports and manuals on small system financial operations have been developed through contracts with consultants. Workshops have been provided for water system operators throughout the state.

From all this effort we (and many other states) have concluded that there are many aspects of the "small system problem." These include design, operation and management, and ownership types. But the foremost problems are the lack of knowledge of system owners/operators—both as to the requirements for such systems, like SDWA standards, and the proper operation of the system—and the financing problems associated with small size and lack of customer base.

The Safe Drinking Water Act is compounding this systemic problem with its technical and massive new requirement for monitoring, testing, and—if needed—treatment. The statewide Public Water System Needs Assessment that we completed in January, 1993, concluded that new operational requirements for small systems, particularly the mandatory monitoring and testing, will drive the monthly household costs for customers on the very smallest systems into the \$50 to \$70 range. These monthly household rates will go even higher if additional monitoring/testing has to be done—if, for instance, a positive test under the Total Coliform Rule requires a small system to increase its number of coliform tests over a two-month period from two to ten. These types of unavoidable costs mean that even with the most innovative small system programs, some small water systems—even properly operating ones—are doomed. Attached is a copy of the Executive Summary of the Needs Assessment Report.

Washington's small water system strategy is a comprehensive one. It has three basic objectives: (1) reduce the number of new small water systems; (2) improve the compliance of existing small water systems; and (3) develop and improve partnerships with local governments and large utilities.

The key components of the comprehensive strategy are as follows:

- **Comprehensive long-range water system planning**, even for small systems, that focuses on service responsibility, needed system improvements, SDWA requirements, system coordination (shared facilities, and financial management
- **Financial viability assessments**—which I will turn to in more detail in a minute—that focuses on the total cost of the water supply, and is tied to the water system plan

Testimony of B. David Clark, March 14, 1994

- **Satellite management and restructuring**, utilizing the economies of scale and feasible service areas of large utilities, coupled with either incentives toward restructuring (e.g., creation of water districts) to forced changes (e.g., court receiverships of failing systems)
- **An operating permit program**, renewable annually, that operates both as a compliance tool (e.g., annual assessment of system status and progress) and a source of revenue (permit fees) for the Drinking Water Program
- **Growth Management planning** under state law, which requires most local governments to assess water system adequacy before issuing building permits or subdivision approvals
- **Operator certification program**, entirely fee-supported, that focuses on assuring knowledgeable operators; we are currently evaluating the need and value in expanding this to include all SDWA-jurisdictional systems
- **Compliance and enforcement strategies** that prohibit or limit the expansion of poor systems and impose civil penalties on the real bad actors
- **Sanitary surveys**, which are generally provided by the engineers in our three regional offices; however, our ability to do this has been severely limited because of SDWA/EPA focus on rule development and enforcement
- **Source vulnerability assessment** that varies from severely restricting the use of surface water supplies for small systems to developing comprehensive groundwater quality data to enable small systems to obtain waivers under EPA's Phase 2/5 organic chemical rule
- **Financial assistance**, which was provided through two state bond-financed programs totaling \$125 million from 1978 through 1992, and which is now exhausted
- **Technical assistance** in implementation of the SDWA requirements, including management and operational improvements to resolve compliance problems, and when capital improvements are necessary helping systems gain access to financial assistance programs

All of these elements are important to our comprehensive approach to small systems. Washington's Financial Viability Program has the goal of assuring that small systems are viable, not necessarily eliminated, and is the cornerstone to our efforts because of its many uses. In developing the program, we have attempted to make it as complete and easy to understand as possible, principally because of the lack of awareness and understanding by those for whom it was intended.

The fundamental elements of the program are designed to force a small water system to properly assess its ability to fully finance the total cost of developing, constructing, and maintaining a public water system in full compliance with federal, state, and local requirements. It is directly related to the system's development of a water system plan that requires a system to first analyze and determine what it wants and needs to do—a fairly basic notion of planning that very few small systems take the time to do.

Testimony of B. David Clark, March 14, 1994

The self-assessment by the system is done through a manual/workbook that tells the system operator what information is needed, and makes it easy to complete the analysis. It is composed of four basic tests:

- (1) Development of a budget, including operation/management, capital improvements, and depreciation, for a minimum six-year period—which includes calculation of the revenue necessary from system customers;
- (2) Maintenance of an operating cash reserve, in a separate account, equal to or greater than one-eighth of the annual operation/maintenance budget;
- (3) Maintenance of a capital cash reserve, equal to the replacement cost of the most vulnerable system component; and
- (4) Comparison of rates, including projected ones, with an affordability index set at a maximum of 1.5% of the monthly median household income.

Implementation of the full Program is being done progressively, taking advantage of opportunities to put it into place, and recognizing that a full measure of education is still required as part of implementation. Here's how we are doing it:

(1) Working in conjunction with the Washington Utilities and Transportation Commission, all UTC-regulated private water companies—approximately 80 companies, covering 300 to 600 systems—are developing water system plans with financial viability components. The results are being used to assist the UTC in some of its determinations, such as rate reviews. It is also forcing these for-profit utilities to seriously assess their future as "money-making" entities, and analyze other options, including some form of restructuring.

(2) As part of our operating permit program, systems are evaluated as to their adequacy under a number of criteria, including completion of a water system plan that encompasses a financial viability assessment. If the system "passes," the system is categorized as adequate, the public's health is assured, and the system may continue to develop. If it does not "pass," development is curtailed, and a process leading to restructuring or receivership may follow.

(3) In approving new systems, water system cost figures developed through financial viability analysis will be disclosed to prospective homeowners, enabling them to make informed judgments about where to live.

(4) In assessing any one system's options, including various forms of restructuring, the financial viability program provides comparative cost data very useful in making decisions among otherwise confusing choices.

(5) In reviewing and evaluating applications for financial assistance for capital improvements through Washington's Public Works Trust Fund or the Farmers Home Administration, our Financial Viability Program permits the assessment of the system's long-range prospects, thereby allowing the prioritization in the use of public funds, and avoiding "bad projects" where the system does not appear capable of sustaining itself in the long run.

Testimony of B. David Clark, March 14, 1994 -

I have some additional material on our Financial Viability Program, including the attached portions from our draft Financial Manual. We would of course be happy to share other information with the Committee. But let me offer these conclusions as you consider the concept of "financial viability" as part of a national strategy toward small water system issues:

(1) Washington has gotten to where it is only after at least five years of considerable internal debate, as well as discussions in a variety of outside arenas, including the Legislature. The notion of "financial viability" requires a considerable amount of time to educate all those affected, including legislators, water system operators and customers, local elected officials, local government agencies, and other regulatory bodies, to name a few. We still have a lot of education to do with realtors, developers, and lending institutions, which will require a lot of time and effort on our part, and will undoubtedly result in situation-specific tailorings of our basic approach. We also need to insure that we avoid any political backlash that could undermine the progress that we have made.

(2) Our Financial Viability Program has been implemented without being mandated, or even mentioned, by the Safe Drinking Water Act. There is clearly a direct relation between the two—the SDWA is accelerating the creation of nonviable systems. However, Congress should be very cautious about mandating any national standard as to "viability," because the circumstances in each state may vary considerably, and this type of assessment will be a logical step for many states to take without a federal mandate to do so.

(3) Washington has been fortunate in having the resources necessary over the past several years to develop our program, and to maintain an adequate planning program. Other states that don't have such state resources will find it extremely difficult to develop and implement such programs unless Congress and the EPA provide them.

#### Alternate Filtration and the Western States Protocol

I am happy to provide you with information on a successful collaboration between Washington, the EPA, and several western states in the area of filtration of surface water supplies.

Under the federal Surface Water Treatment Rule, promulgated by the EPA in 1989, community water systems that utilize surface water sources, as well as some groundwater sources that may be affected by surface water, are generally required to filter and disinfect the water prior to providing it to the consumer. This Rule was established to control the harmful effects of disease causing organisms such as *Giardia lamblia* and enteric viruses. EPA recognizes four standard filtration technologies which are effective in removal of these organisms. These technologies are in widest use today, but for the small water system, are generally too complex and costly as well as being difficult to operate effectively.

Acknowledging these limitations, the rule also allows the use of non-standard, or "alternate", filtration devices—if the effectiveness of these units can be demonstrated to the individual States. Some examples of easily-operated filtration devices are cartridge, bag, and membrane filters which primarily rely on a straining principle to remove most harmful microorganisms.

Testimony of B. David Clark, March 14, 1994

Because of the large number of small water systems in the state potentially affected by the Rule, we recognized the need to identify alternate filtration technologies appropriate for small systems. The Drinking Water Program sought and, in late 1991, received EPA assistance in developing a regional approach to evaluation of these devices. In January 1992, under EPA contract, drinking water administrators from seven western states met to develop a unified approach to the evaluation of these devices. This process is outlined in the technical report, Consensus Protocol for Evaluation and Acceptance of Alternate Surface Water Filtration Technologies in Small System Applications (Bruce Barrett, April 1992).

The Protocol identifies three steps to be taken when an alternate filtration device is proposed for application. These are: 1) lab studies demonstrate Giardia cyst removal effectiveness; 2) device is evaluated for leaching of contaminants; and 3) on-site pilot testing is performed to establish performance characteristics and reliability in the field.

Since the Protocol does not spell out the specifics of how each test element is to be performed, this is occurring in individual states based largely on local preferences and lab capabilities. This has resulted in some manufacturer and consumer confusion and has diluted the original "unified" approach. at this time.

To date, DOH has evaluated and approved Giardia removal demonstrations for three proprietary filtration devices. The remaining test elements for each of these devices are in various stages of progress. Achieving "leachate" approval (under ANSI/NSF standard 61) has been the most problematic step of the whole process --apparently due to the time and expense to the manufacturer involved.

Washington, Idaho, and Alaska appear to be closely adhering to the original intent of the Protocol, and approvals in any one of these states should be "honored" in the others. How the remaining states of the original seven--Oregon, California, Montana, and Colorado--are proceeding is not known at this time.

Although clearly a successful effort, there are several issues still remaining from our experience with developing this alternative technology:

(1) The Protocol also identified a need for a central "clearinghouse" to provide information transfer services. The National Drinking Water Clearinghouse (West Virginia University) appears to be the organization of choice for this purpose. However, data acquisition and transfer questions remain at this time.

(2) A national protocol would be helpful, and current efforts by ASDWA and EPA to develop such a protocol should continue.

(3) Utilization of the alternative technology will depend on the extent to which water systems and/or engineering consultants are aware of, and are willing to recommend, such options. We do not know yet how this will play out.

Testimony of B. David Clark, March 14, 1994

### Current EPA Implementation of the SDWA

My views on the current implementation of the SDWA in Washington are not really unique, and not likely to be any surprise to this committee. The problems that states currently have, and will continue to have, in attempting to administer and enforce the SDWA have already been well-documented in reports to Congress. The two most recent ones are the June, 1993 GAO Report entitled Drinking Water Program: States Face Increased Difficulties in Meeting Basic Requirements (GAO/RCED 93-144), and the September, 1993 EPA Report entitled Technical and Economic Capacity of States and Public Water Systems to Implement Drinking Water Regulations (EPA 810-R-93-001).

These are only the most recent reports documenting the almost Alice-in-Wonderland situation facing many states that currently have primacy under the SDWA. Foremost in my mind is how some of the fundamental concepts underlying the SDWA, and the federal-state partnerships integral to its acceptance and implementation in all 50 states, have been turned on their head.

First, the idea of national standards that apply systematically to all water systems above a minimum size arose out of the preliminary standards developed under the national public health service, and have always been promoted by public health professionals as essential to maintaining and protecting the health of this country's citizens. Now, however, drinking water standards under the SDWA are more and more being driven by laboratory detection capabilities, with inadequate research as to their public health basis and significance. As a consequence, the SDWA is requiring enormous amounts of money to be spent by states and by water systems to remedy possible health risks, with little regard to the nature or seriousness of the actual threat in any given state. State drinking water administrators, who are in every case committed public health professionals, have to make judgments as to which contaminants, and which EPA rules, actually pose significant health risks to their states. Yet when they have suggested to Congress, or to the EPA, that such assessments—which are an integral part of any public health professional's job—be allowed by the SDWA, they have found themselves characterized as "undermining" public health. Nothing could be further from the truth. In fact, the public's confidence in the system of water supply regulation is being undermined by ever-increasing requirements, some at significant cost, with inadequate explanations of the health basis for them, and without any effort to characterize some water quality threats as more significant than others. Public confusion is further created by reports that provide statistics that by themselves have questionable informational value, and promote the notion that public health professionals are not taking their responsibilities seriously, and are ignoring serious threats to the public's health. If you take away nothing else from my testimony, I would like you to remember that this is a gross misrepresentation, and that in my view drinking water programs are doing an admirable job trying to make sense of what to many is becoming more and more nonsensical.

Second, the SDWA was set up by Congress as a form of partnership, where a state could elect to enforce the Act within its boundaries (i.e., obtain "primacy"), provided that it was willing to put up a minimal portion—25%—of the cost to run the program. Virtually all states have elected to take primacy, because it benefits virtually everyone to have those most familiar with each state's circumstances responsible for implementing the Act. Now, however, the burdens imposed by EPA on each state to administer the SDWA are escalating rapidly because of the complex, technical, data-intensive regulations that have been the product of the 1986 amendments to the Act, and the states are being asked to pay for it. In Washington, we are faced with being required to go from approximately 73 staff in our state program now to about 170 by 1998 in order to have a program that meets all SDWA and state operational



Testimony of B. David Clark, March 14, 1994

requirements. And, as you know, the states are being asked to foot the bill, since the most recent Administration budget proposes an actual reduction in EPA grants to the states for administration of the SDWA. This lack of resources at both the federal and state levels, and increasing burdens being imposed, has created a crisis. The Congress must either provide more resources or the flexibility to prioritize the implementation of the Act based on public health protection.

Third, as the GAO report before you today points out so well, there is an inherent contradiction between the minimum size systems subject to the requirements of the SDWA—systems as small as 15 connections are subject to it—and EPA's evaluation of the "feasibility" of its rules based on costs to large, municipal systems. This is particularly true for the monitoring and testing requirements, where the frequencies for such testing on all systems are entirely within the discretion of EPA under the SDWA. Compounding this lack of consideration for small systems is the admission by the EPA, in its September 1993 Report, that in analyzing certain of its rules it has grossly underestimated the costs to small systems by vastly overestimating the ability of states to utilize waivers and exemptions for such system costs. As we determined in our 1993 Public Water System Needs Assessment, the monitoring and testing costs alone to small systems will drive customer rates to unaffordable levels.

Fourth, in many cases the rules promulgated by EPA presume national conditions, when in fact there are considerable differences in occurrences of different contaminants or potential sources of contamination. In Washington, for instance, we do not have a history of heavy industry in our urban areas, nor do our major surface water supplies flow through industrialized watersheds, nor have our large municipal systems ever utilized lead service pipes to any significant degree. However, we do have many small systems at risk from coliform contamination due to inadequate construction and inadequately treated surface waters, and many systems with high levels of nitrate contamination. Yet the State is being asked to implement the SDWA under the national set of priorities and test for the same organic and inorganic chemicals, meet the same extensive watershed management criteria, and search the same number of household taps for high levels of lead and copper that, if present, are the result of household plumbing. The proposed radon rule is another example where the potential health threats vary considerably from state to state, and within regions of the state. Rather than require all systems to comply uniformly with such requirements, states should have the ability to use existing data to determine likely problem areas or systems, and devote their limited resources to them.

#### SDWA Reauthorization

The Governor of Washington, Mike Lowry—a former member of Congress and colleague of many of you—recently wrote to the entire Washington delegation to request support for HR 3392, generally referred to as the "Slattery-Bliley" bill. It is also known as the "Coalition" bill, since it was developed over a year by such interested groups as the National Governors Association, the National League of Cities, the National Association of Counties, the Association of State Drinking Water Administrators, U.S. Conference of Mayors, National Rural Water Association, American Water Works Association, National Conference of State Legislators, and National Association of Regulatory Utility Commissioners. The letter from Governor Lowry—a copy of which is attached—outlines why he is asking the State's delegation to support HR 3392. I have already discussed many of those reasons.

Testimony of B. David Clark, March 14, 1994

In announcing its "Ten Principles" to guide legislation reauthorizing the SDWA, the EPA proposed major advances and improvements to the states responsible for actually administering the Act. Particularly commendable are their emphasis on source water protection, funding for water systems, small system technologies, data-based standard setting, and flexible time frames for rule compliance.

Some of the principles, however, are cause for concern. The desire, for instance, to create national standards for "financial viability" is fraught with the risk of creating the same sort of inflexibility that already exists in many of EPA's rules, without accommodating state differences, particularly western states with large rural areas. Also of concern is the emphasis on strengthening enforcement, not because enforcement isn't necessary, but because many systems—particularly small ones—fail to comply with SDWA standards because of their complexity and the unavailability of technical assistance, and not because of any intent to evade public health requirements.

From my perspective, probably the major flaw with EPA's "Ten Principles" is the absence of any "principle" suggesting EPA's support for increased federal funding or other federal resources to the states that are currently struggling to administer the SDWA. The proposed federal "backstop fee" has some significant advantages, and some form of it may be part of the answer. The failure to advance such a fundamental principle undercuts the notion that this is to be a federal-state partnership, and places the principal responsibility for resources to implement the SDWA on the shoulders of the states. The proposed reduction in the EPA budget for PWSS grants to states belies the statement made by EPA in their September, 1993 Report to the Congress that they would continue to support the recent trend of slow but steady increases in these funds. Forcing states to burden the systems with the financing of SDWA implementation artfully permits EPA to avoid discussions of the propriety and costs of the rules that it adopts, and invites federal agency intervention into state agency management of state programs. It does not commit the EPA to any financial share of the program, and, taken to extremes, this proposal amounts to a "blank check" for EPA, and further erodes the initial principle of shared federal-state funding for what is supposed to be a federal program. Such a proposal should be reviewed very carefully by Congress before authorizing or enacting any version of it.

Needless to say, I agree wholeheartedly with what Governor Lowry says in his letter. I also have helped formulate the position of ASDWA on reauthorization of the SDWA, and support that effort. I also want to make sure that the members here know that SDWA reauthorization efforts in the Senate, particularly those around S. 1547, the measure introduced by Senator Baucus, have produced a number of very productive ideas and are helping achieve consensus on very contentious issues.

Let me just add my own views on what I would consider to be the fundamental components needed in a reauthorized SDWA:

(1) **Primacy:** State programs are best suited to implement the SDWA. There is very little disagreement on this. However, states do not have adequate resources, nor sufficient flexibility for implementation of the SDWA. If the federal government is going to rely on states as the principal instruments for implementing the will of Congress, there has to be a willingness and commitment to assuring that states are able to do so. This should include:

Testimony of B. David Clark, March 14, 1994

- A 50-50 share of the cost of SDWA administration;
- State authority to make assessments and allocate resources to actual and high priority water quality issues; and
- Elimination of unnecessary bureaucratic burdens (e.g., having to obtain primacy on a rule-by-rule basis from EPA).

(2) **Standards and rule development:** The statutory language now in the SDWA is sufficiently flexible to permit appropriate water quality standards to protect public health. What has been lacking is a willingness on the part of EPA and others to admit that for many contaminants, there simply is not an adequate scientific basis to support any standard. In addition, the standard rulemaking process fails to identify and resolve many implementation problems that become apparent to states once they are faced with administering a given rule. Yet, once adopted, the rule is difficult to change. An example of this is the Phase 2/5 Rule, where a state/federal task force convened by EPA to address such issues came up with several hundred recommended changes, none of which have been adopted by EPA, leaving states the job of administering a rule with numerous flaws. To remedy this:

- Maximum Contaminant Levels (MCL's) should only be promulgated when there is scientifically-valid evidence, concurred with by EPA's Science Advisory Board, that a contaminant is found to occur in drinking water in frequency and concentration to create a risk to public health;
- Best Available Technologies (BAT's) should be established for small systems;
- MCL's should be the same for large and small systems, in order to assure the same level of health protection;
- The preferred method for rulemaking should be negotiated rulemaking, as was done recently with Groundwater Disinfection/Disinfection Byproducts, which allows the most significantly affected interests to participate in the rule development and identify problems at an earlier stage of the rule; and
- EPA should be required to develop and maintain a contaminant occurrence data base on which new standards are based and existing ones are reevaluated.

(3) **Small water systems:** The discussion of financial viability above outlines my views on the fundamental approach to small systems that we are following in Washington. On a national level, I would offer the following:

- System viability, not restructuring, should be the principal goal, but each state should be responsible for defining and implementing such standards;
- Small systems need more time and flexibility to comply with water quality standards, including monitoring requirements, and not "weaker" standards;
- Operational effectiveness and operator training is the key to small system compliance, and must be provided to SDWA-jurisdictional systems; and
- The SDWA should provide incentives and funding to implement viability programs, rather than simply a mandate to do so.

(4) **Financial/technical assistance:** This issue has already been debated at some length in the House of Representatives, and is the subject not only of HR 3392, but also of two bills--HR 1701 and HR 1865--that are out of their respective committees and ready for action by the full House of Representatives. I can't emphasize enough that, regardless of how a reauthorized SDWA turns out, water systems are already facing major capital burdens from existing EPA rules, and a State Revolving Fund

Testimony of B. David Clark, March 14, 1994

(SRF) Program is needed now. Congress has already appropriated \$600 million for this fiscal year for start-up capitalization grants to an SRF program, which I urge you not to lapse because the program is not authorized. In general:

- SRF money is essential for small communities for assistance in meeting SDWA capital needs, as well as for engineering feasibility studies regarding restructuring alternatives, and to provide the funding for satellite management agencies to take over "basket cases" or nonviable systems;
- State technical assistance programs are essential to effective utilization of SRF money both to obtain access to funds and to provide cost-effective projects; and
- The EPA should give highest priority to the routine provision of sanitary surveys by state drinking water programs to regulated systems, rather to other SDWA mandates that force states to allocate resources to functions that have little to do with proper public health protection.

(5) **Monitoring/data management:** Under the most recent EPA rules, states are being required to spend more and more of their scarce resources in simply processing test results, designing software, buying hardware, and otherwise managing a massive flow of data arising from the extensive monitoring schemes EPA requires systems to follow. At times states have also been required to adopt rules, or enforce federal ones, when laboratory capacity is not in place to perform the required tests. This not only places states and systems in impossible situations, it also undermines the credibility of EPA and states in the eyes of system operators and the public. To remedy this:

- States should be given greater flexibility to design risk-based monitoring requirements, particularly for small systems that do not have great technical or financial capacity, and may not have significant risks with regard to certain contaminants;
- Analytical procedures and laboratory capability should be in place before imposing new monitoring requirements; and
- Data management systems at the state/federal level should be defined at the time of rule development to allow sufficient time to put the needed systems in place.

This concludes my testimony. I would, of course, be happy to respond to any questions or requests for further information. I sincerely appreciate your time in taking a look at this issue, and remain confident that consensus will be developed this session on these issues that will permit a much-improved SDWA that continues to provide high levels of public health protection.



STATE OF WASHINGTON  
OFFICE OF THE GOVERNOR

P.O. Box 40002 • Olympia, Washington 98504-0002 • (206) 753-6780

January 21, 1994

The Honorable Mike Kriedler  
1535 Longworth House Office Bldg.  
Washington, D.C. 20515

Dear Mike:

As Governor of Washington, and a former member of Congress, I am writing to urge your support of HB 3392, the Safe Drinking Water Act Amendments of 1993 and HB 1701, an act to create a state revolving fund for public water systems.

HB 3392 is a bipartisan measure cosponsored by Congressmen Jim Slattery (D-KS) and Tom Bliley (R-VA). I understand that this bill has been cosponsored by approximately 60 additional members of Congress, although not yet by any member of the Washington Delegation. I am writing to ask you to consider becoming a cosponsor, and otherwise fully support this measure.

HB 3392 represents the work of a broad coalition of groups knowledgeable about the current Safe Drinking Water Act (SDWA) and motivated to assure better public health protection through the revisions proposed in HR 3392. The National Governors Association (NGA) is one of the members of the coalition that developed HR 3392, which tracks the recommendations for changes to the SDWA adopted by the NGA in 1992. HR 3392 is also supported by the National League of Cities, National Association of Counties, Association of State Drinking Water Administrators, U.S. Conference of Mayors, National Rural Water Association, American Water Works Association, National Conference of State Legislators, and National Association of Regulatory Utility Commissioners. Washington representatives have actively participated in most, if not all, of these groups' work on what has become known as the "Coalition bill." These and other groups are vitally and directly interested in assuring that we all have safe and reliable drinking water supplies.

There is near-universal agreement that the SDWA as it currently exists, and is being implemented by the Environmental Protection Agency (EPA), has major flaws that must be corrected. These problems include overly-cumbersome and complicated rules, massive costs for water systems (particularly for small system customers), major increases in implementation costs on administering states like Washington, and inadequate research on health effects, to name a few. I see serious problems being created by the SDWA in this state, including the following:

- Of the nearly 5000 water systems in Washington subject to the SDWA, all but 170 are considered "small" by the EPA (either community systems with fewer than 1000 hookups or non-community systems). These small systems, when forced to do the monitoring, testing, or treatment required by the EPA under its new rules will face potentially major

January 21, 1994  
Page Two

rate increases that could drive monthly household charges up to \$100 or more. The EPA has not adequately addressed this issue, stating that it bases its economic analysis on "large municipal system" costs, which does not reflect the reality of the vast majority of systems in Washington. HB 3392 makes special provision for small system problems, including the development by EPA of appropriate technology for different size systems.

- EPA's "one size fits all" approach to setting national standards does not account for regional or state differences. Washington, for instance, does not have the history of chemical pollution that more industrialized states have, nor the widespread use of lead pipes like many major eastern cities have. Yet the EPA rules require Washington's systems to conduct the same types of expensive testing and monitoring as are appropriate in areas where these types of contaminants may be expected to be found. HB 3392 would allow tailoring of monitoring and testing by each state to its own circumstances, and provide additional flexibility to the states in determining appropriate water treatment requirements.
- The 1993 Public Water System Needs Assessment conducted by the Department of Health concluded that by 1999 the state's water systems will need nearly \$700 million in capital funding to meet SDWA requirements. The study noted that figure could increase significantly if existing exceptions are not maintained (e.g., the City of Seattle may be required to spend approximately \$300 million to build a filtration plant for the Cedar River if it does not continue to receive its exception under the SDWA). There is not now any major federal funding program for such federally-driven capital costs (like there was for wastewater treatment under the Clean Water Act). Congress has appropriated \$599 million in start-up money in FY 94 for the proposed Drinking Water State Revolving Fund. That funding will lapse on September 30 if such a program has not been authorized. HB 3392's one major omission is authorization for such a program. However, Congressman Waxman has an act (HB 1701) that would authorize such a program independently of the re-authorization of the SDWA in HB 3392. Given that these major costs will be incurred regardless of the prospective changes in the SDWA, the State Revolving Fund program envisioned in HB 1701 should be enacted immediately.
- According to the EPA's model, the Department of Health will have to increase its level of staffing from the current 73.5 FTE's to approximately 170 by 1998 in order to have a program that satisfies the EPA. Most of these increases would be directly due to administration of existing and proposed rules under the SDWA. EPA currently provides only about 30% of our Drinking Water Program funding, even though more than half the Program's functions and activities are directly generated by the SDWA. For the current fiscal year, the EPA proposed no increase in grants to the states for administering, although Congress on its own initiative added another \$5 million for the states. The heavy increase in workload being forced on the states can only be done through major increases in federal funding, which the current Administration has not proposed to provide. The state of Washington cannot afford such increases, given its current fiscal problems and the future limitations on state revenues imposed under Initiative 601. HB 3392 will provide the major increases in state funding necessary.

January 21, 1994

Page Three

I think I can safely characterize the 1986 Safe Drinking Water Act amendments as well-intentioned legislation, based on the best available information at the time, that in its implementation has gone awry. We now know much more than we did in 1986, particularly with regard to the existence of many contaminants, their potential health effects, and the enormous costs that will have to be borne by utilities and state and local governments to implement the rules enacted by the EPA. While there is a lot we still don't know, I think it is time to make a mid-course correction to the SDWA, based on knowledge accumulated over the past seven years. HB 3392 will do that.

Although I am asking that you support HB 3392 (and any Senate version I understand may be introduced), I am aware that SB 1547 (the "Baucus bill") also contains a number of provisions that would materially improve the SDWA and its administration. Many of these changes are meritorious and deserve your support. However, at this point, HB 3392 represents the work of a large number of organizations, and the consensus of a variety of viewpoints, including those of the Governors of the 50 states. Because of the lengthy debate and compromise that has already gone into this bill, it warrants your strong efforts on its behalf.

Finally, I want to note that, despite its broad support from a range of organizations, HB 3392 is being criticized as "weakening" of public health protection. I do not believe that claim is accurate, and I am not aware of any such criticisms being made by Washington organizations knowledgeable about drinking water issues. The public health of our citizens can only be adequately protected if reasonable decisions are made on the allocation of our resources to all the types of threats being made to public health. We cannot afford to divert scarce resources to theoretical public health threats and away from real and demonstrable ones, of which we have many.

In my one year as Governor, I have become well aware that the citizens of this state will no longer tolerate increasingly expensive burdens imposed on them by any level of government without clear delineation of the need. They are willing to support good public policy, with clearly stated objectives, and reasonable measures to achieve them. HB 3392 will go a long way toward assuring that, at least with regard to safe and reliable water supplies.

Sincerely,

  
MIKE LOWRY  
Governor

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**SENATE JOINT MEMORIAL 8021**

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AS AMENDED BY THE HOUSE

Passed Legislature - 1993 Regular Session

**State of Washington                      53rd Legislature                      1993 Regular Session**

**By Senators Williams, McCaslin, Fraser, Talmadge, M. Rasmussen, Moore, Deccio, Sutherland, Barr and Franklin**

Read first time 02/26/93. Referred to Committee on Ecology & Parks.

1        TO THE HONORABLE BILL CLINTON, PRESIDENT OF THE UNITED STATES, AND  
2        TO THE PRESIDENT OF THE SENATE AND THE SPEAKER OF THE HOUSE OF  
3        REPRESENTATIVES, AND TO THE SENATE AND HOUSE OF REPRESENTATIVES OF THE  
4        UNITED STATES, IN CONGRESS ASSEMBLED:

5        We, your Memorialists, the Senate and House of Representatives of  
6        the State of Washington, in legislative session assembled, respectfully  
7        represent and petition as follows:

8        WHEREAS, The Congress has enacted comprehensive national  
9        legislation protecting public health and preserving the environment,  
10       including such measures as the Safe Drinking Water Act, the Clean Water  
11       Act, the Resource Conservation and Recovery Act, the Clean Air Act, the  
12       Toxic Substance Control Act, and the Federal Insecticide, Fungicide,  
13       and Rodenticide Act; and

14       WHEREAS, The provisions of each of these measures and other similar  
15       measures envision a partnership and shared responsibility between the  
16       federal government and state governments for assuring that their  
17       objectives be attained and that they are best administered at the state  
18       or local level where the issues, problems, and remedies under each are  
19       best understood; and

20       WHEREAS, The State of Washington has formally accepted the  
21       delegation of responsibility from the federal government for



1 administration and enforcement under these and other similar measures;  
2 and

3 WHEREAS, Each of these programs contains an express or implied  
4 promise of adequate federal resources to the states to assure full  
5 implementation of their requirements; and

6 WHEREAS, The costs to the states of administering each of these  
7 programs is escalating rapidly, while the level of support and funding  
8 to the states from the federal government for these programs is either  
9 declining or failing to keep pace with the cost of new requirements  
10 being imposed at the federal level; and

11 WHEREAS, It is incumbent upon the federal government, as part of  
12 its shared responsibility with state and local governments to assure  
13 safe drinking water; clean air; clean rivers, streams, and aquifers;  
14 safe disposal of contaminants; and the general health and safety of the  
15 citizens of this country, to provide adequate resources to the states  
16 that have accepted delegation of responsibility for enforcement of  
17 these federal programs with the understanding that the delegation  
18 includes a commitment by the federal government to provide such  
19 resources; and

20 WHEREAS, The Washington State Department of Health has determined  
21 that it will need to increase its budget by eight million six hundred  
22 thousand dollars over the next two years simply to provide adequate  
23 staff to carry out its mandates under the Safe Drinking Water Act  
24 administered by the Environmental Protection Agency; and

25 WHEREAS, The Washington State Department of Health conducted a  
26 Public Water System Needs Assessment in 1992, which concluded that the  
27 state's water systems will need to incur additional capital  
28 expenditures of six hundred eighty-six million dollars between 1993 and  
29 1999 because of new requirements under the Safe Drinking Water Act,  
30 including millions of dollars for surface water treatment and other  
31 Safe Drinking Water Act requirements in 1993; and

32 WHEREAS, The costs incurred under these Safe Drinking Water Act  
33 requirements, both to the Department of Health and to the state's  
34 public water systems, may not be related to significant risks to the  
35 public health that exist in the State of Washington; and

36 WHEREAS, The federal government is proposing only modest increases  
37 in the federal grant to the State of Washington and other states for  
38 administering the Safe Drinking Water Act, in the face of major  
39 increases in costs to the state; and

1 WHEREAS, The federal government currently has no comprehensive and  
2 large-scale program of financial assistance to public water systems  
3 that will be forced to incur major capital costs for Safe Drinking  
4 Water Act compliance; and

5 WHEREAS, States are faced with major increased costs for  
6 administering many of these federal programs simultaneously and in the  
7 face of increasingly difficult fiscal situations; and

8 WHEREAS, The State of Washington is currently facing a budget  
9 deficit of approximately one and one-half billion to two billion  
10 dollars in a total budget of approximately sixteen billion dollars,  
11 which is forcing many painful decisions on budget cuts and tax or other  
12 revenue increases; and

13 WHEREAS, Both the Safe Drinking Water Act and the Clean Water Act  
14 are due for federal reauthorization; and

15 WHEREAS, The National Governors Conference in 1992 adopted an  
16 eight-point program with regard to reauthorization of the Safe Drinking  
17 Water Act that addresses many of these issues; and

18 WHEREAS, President Clinton has announced a program to provide both  
19 short-term and long-term investment into the infrastructure of this  
20 country, including its water systems; and

21 WHEREAS, The State of Washington desires to maintain the high  
22 quality of its waters and environment and the high level of health of  
23 its citizens;

24 NOW, THEREFORE, Your Memorialists respectfully pray that the  
25 President and the Congress of the United States:

26 (1) Review in a comprehensive fashion the Safe Drinking Water Act  
27 and other similar measures to assess the impact upon the states, local  
28 governments, and others subject to their provisions of the costs of  
29 complying with them and whether such costs are justified by the risk  
30 being addressed;

31 (2) Substantially increase to the states the amount of resources  
32 necessary to implement federal programs, so that the state financial  
33 burden is restored to the levels and proportions originally  
34 contemplated under such legislation;

35 (3) Study and implement, where appropriate, modified delegation and  
36 enforcement of federal laws to reflect the state's ability to implement  
37 and enforce all or a portion of such federal laws;

1 (4) Require that federal agencies accept the responsibility for  
2 implementation and enforcement of federal laws where the federal  
3 government has not provided adequate resources for the state to do so;

4 (5) Reauthorize the Safe Drinking Water Act, incorporating the  
5 recommendations of the National Governors Conference with regard to  
6 additional flexibility in state enforcement, increased efficiency in  
7 the operation of the Safe Drinking Water Act program, and increased  
8 resources to the states and water systems to meet the Safe Drinking  
9 Water Act requirements; and

10 (6) Make substantial funding available, for both 1993 and long-term  
11 needs, to water systems that are required to make capital improvements  
12 to their systems because of provisions of the Safe Drinking Water Act.

13 BE IT RESOLVED, That copies of this Memorial be immediately  
14 transmitted to the Honorable Bill Clinton, President of the United  
15 States, the President of the United States Senate, the Speaker of the  
16 House of Representatives, and each member of Congress from the State of  
17 Washington.

--- END ---

## FINANCIAL PROGRAM

**OBJECTIVE:** To identify the total cost of providing water service, assure that the utility improvement schedule will be implemented, and assist in establishing adequate water rates.

Financial planning is one of the most important aspects of the water system plan. A basic financial program must be established to successfully implement the plan. In order to develop a complete financial assessment the total cost of providing water service must be identified. This is referred to as the "financial viability" of the water system. *Specifically, the financial viability of a water utility is represented by the systems ability to fully finance the total cost of developing, constructing, operating, and maintaining the water system in full compliance with federal, state and local requirements.*

The financial program should also facilitate the creation of a detailed Capital Improvement Plan. Through the financial program the utility's decision makers are assured that the improvement schedule can be implemented because they will know how improvements are intended to be financed. Thus, a good financial program can make the difference between a "wish list" and a useful and implementable plan.

In addition, a complete financial program can assist the utility in establishing water rates and other charges that reflect the actual cost of providing service.

### **PLAN CONTENT**

A well-conceived financial program should be carefully coordinated with Section \_\_\_\_, Identification of improvements when alternatives are being selected. The financial program should also be carefully coordinated with Section \_\_\_\_, scheduling of improvements to assure a realistic improvement schedule.

### LEVEL OF DETAIL

Financial planning is a complex subject. It is often difficult for the utility to determine the appropriate level of detail needed in the water system plan. The water system must include a general financial framework that addresses the utility's overall financial situation and a specific financial program for making system improvements. Detailed financial arrangements, such as lending institution requirements or specific rate design information need not be included in the plan.

The following criteria can serve as a guide for presentation of financial information concerning system improvements.

1. Major Facilities. Major facility improvements should be subjected to a thorough financial evaluation. Major improvements include source development, storage, transmission, and treatment projects. Financial aspects of minor improvements may be examined more briefly.
2. Criteria Facilities. Specific financial arrangements should be indicated for facility improvements needed to satisfactorily operate the water system both from a water quality and reliability standpoint. Facilities needed to bring the water system into compliance with State and Federal standards are included in this category.
3. Distribution Facilities. If known distribution projects are identified in the water system plan more complete financial arrangements can be identified. However, if distribution projects are scheduled on an annual basis, a much more general funding program could be developed. For example, annual funds set aside for making distribution improvements could be identified without specifically identifying each distribution project.
4. Non-Facilities. Programs and studies relating to crucial utility decisions about operations, water quantity and water quality should be accompanied by specific financial arrangements. This could include but not be limited to Ground Water Protection Programs, Watershed Control Programs, Conservation Programs, Comprehensive Rate Analysis studies and engineering studies related to specific projects.
5. Timing of Improvements. Facilities scheduled for construction within six years of the water system plan approval date should be more thoroughly evaluated than facilities scheduled for later construction. Since Capital Improvement Programs are usually developed on a yearly basis, thorough financial information should be available for immediate projects. Financial evaluation of projects and studies taking place after the first six years may be much more general.
6. Location of Improvements. More direct control over financing scheduling, and location can be exercised for improvements within legal water system boundaries than for improvements outside system boundaries. Thus, improvements to be constructed within system boundaries should receive more thorough financial evaluation than projects outside system boundaries. Development of financial arrangements for joint-use projects may require complex negotiations between several entities; detailed documentation of financial arrangements is not expected in the water system plan.

#### FINANCIAL PROGRAM DEVELOPMENT CATEGORIES

Financial program requirements have been divided into three categories based on the size and ownership of the water system:

- A. Systems with greater than 1000 services (excludes IOU's regulated by UTC).
- B. Systems with less than 1000 services (excludes IOU's regulated by UTC).
- C. Private for profit water systems. This includes Investor Owned Utilities (IOU's) regulated by the Washington State Utilities and Transportation Commission (UTC).

The financial program requirements are different for each category. For large water systems, the emphasis of the financial program is on the improvement program. Because of available funding sources and a large rate base a thorough assessment of the total cost to provide service is not required. For small water systems, funding sources and the ability to generate capital through rates are limited, therefore the emphasis of the financial program is on a thorough assessment of the total cost to provide service. Investor owned utility's regulated by UTC have a separate method of displaying financial information because of their ability to generate a profit.

#### LARGE WATER SYSTEMS (> 1000 SERVICES) PLAN CONTENT

The water system plan must discuss the following information at a minimum. Department of Health Staff will solely be responsible for review and approval of the financial program for large water systems.

1. Past and Present Financial Status. A clear and concise description of the current financial status of the utility should be provided. Operating income and expenses for the past six years should be summarized. Annual water rate revenue, general facility charge revenue, LID assessment revenue, and any other utility income should be listed under operating income. For operating expenses, annual water system indebtedness (bank loans, bond repayments, etc.), operating and maintenance expenses, facility replacement funds, and appropriations for major improvements should be itemized. Past and present financial information may be displayed in chart form for ease of presentation.
2. Available Revenue Sources. Available and potential revenues source for making future system improvements should be listed and discussed. Available revenue includes funds generated from investment funds and existing sources such as water sales, assessments, general facilities charges (service installation fees, etc.). Potential revenue sources might include general obligation bonds, revenue bonds, assessment income, grant funds (state and federal), developer extension fees, etc.
3. Allocation of Revenue Source. The allocation of revenue source is the key mechanism for implementing the water system plan. A program allocating funds to finance each major improvement scheduled in *Section \_\_\_\_\_*,

*Scheduling of Improvements* can be developed from information on revenue sources (item 2) and the cost of improvements (Page \_\_\_\_). For example, revenue generated from developer extension fees and general facilities charges could be designated for improvements to be constructed in the future service area of the water system. Allocation of revenue source should appear on Chart \_\_\_\_ page \_\_\_\_ *Improvement Program*.

4. Program Justification. To arrive at a realistic financial program, an assessment of the system's capability to obtain potential revenue should be performed. The assessment should describe basic revenue requirements to fund system operation and maintenance and improvements, and discuss the utility's ability to secure the revenue needed. Any assumptions regarding inflation rate, interest rates, bonding limit, grant eligibility, etc. should be clearly stated.
5. Assessment of Rates. The impact of the financial program on water rates should be assessed. The current rate structure used by the utility should be provided. Also, a brief discussion of potential changes in the rate structure to generate funds for future improvements should be included. For example, if revenue bonds will be sold, calculate the estimated accompanying increase in water rates. The effect of increasing water rates upon water demand and ultimately the need for certain improvements should be evaluated.

If the funds needed for scheduled improvements cannot be generated, Sections \_\_\_\_ and \_\_\_\_ , *Identification of Improvements and Scheduling of Improvements* should be examined for possible modification, delay or elimination.

#### SMALL WATER SYSTEMS (< 1000 SERVICES) PLAN CONTENT

The water system plan must address information concerning past and present financial status, improvement program financing, and rate structure. Department of Health staff will solely be responsible for review and approval of this portion of the financial program.

In addition, small water systems are required to take a Financial Viability Test. Prior to submittal of the water system plan for DOH approval, it will be the responsibility of the water system to obtain approval of the Financial Viability Test from a licensed engineer.

1. Past and Present Financial Status. A summary of the current financial status must be provided. This shall include an itemized summary of system revenue and expenses (i.e., income sheets) for the past 3 years and a discussion on how system improvements have been financed historically (one time surcharge, debt, etc.).
2. Improvement Program Financing. For all improvements listed in the improvement schedule (see chart \_\_, page \_\_ *Improvement Program*) a cost and funding source

must be identified. Funding sources can include but are not limited to general facilities charges, obligation bonds, revenue bonds, assessment income, grants, developer extension fees, and FHA and public trust loans.

3. **Rate Structure.** The current rate structure used by the utility must be included in the plan. Also, any contemplated changes to the current rate structure must be addressed. Consideration of rate structures that promote conservation should be a part of any rate analysis.
4. **Financial Viability Test.** The purpose of the financial viability test is to ensure that the water system meets all regulatory and prudent business requirements. It is a way to demonstrate to utility owners and managers, utility customers, and DOH that the total cost of providing service has been taken into consideration. The financial viability test consists of four related tests. The first three tests are to see if the utility has an adequate Operating Budget, Operating Cash Reserve, and Capital Cash Reserve. The fourth test, the household income index, allows DOH and the utility to evaluate the local impact of utility operation and capital funding requirements. Each test is explained in detail in the "Financial Manual For Small Water System Utilities". This manual offers an easy-to-use framework to evaluate financial viability and is available from the Department of Health, Division of Drinking Water, Planning Section.

#### PRIVATE FOR PROFIT WATER SYSTEMS REGULATED BY UTC PLAN CONTENT

Both the Washington State Department of Utilities and Transportation Commission (UTC) and DOH are responsible for evaluating the financial program for IOU's. DOH is ultimately responsible for approval.

UTC will determine if the water system is financially viable and financially feasible. Financial Viability is the ability of an IOU to obtain sufficient funds, on a continuing basis, to cover the total cost of developing, constructing, operating, and maintaining a company in compliance with Federal, State, and local requirements. Financial Feasibility reflects a company's ability to provide sufficient quantity and quality of water service for the planning period.

The following outline identifies the key elements that must be addressed in the financial program for IOU that is regulated by UTC.

1. **Historical Financial Information.** A summary of the past financial status of the company that includes income and balance sheets for the last 3 years of operation.
2. **Future Financial Planning Information.** Future financial planning information must be divided into four parts:



- a) **Projected cost of operation and maintenance activities for the six year planning period.**
- b) **Projected costs of capital improvements identified in the improvement program, chapter \_\_\_\_.**
- c) **Proposed financial mechanisms (i.e., borrowed money, owner or other party invested capital) for each capital and non-capital improvement.**
- d) **Anticipated revenue from existing and proposed rates and related changes which includes an impact analysis of any proposed rate increases. The current rate schedule must also be included in the water system plan.**

To determine the viability and feasibility of a regulated IOU, UTC and DOH have developed a four part test that includes:

- 1. Positive Annual Income
- 2. Positive Retained Earnings
- 3. No Outstanding Agency Orders
- 4. Capital/Asset Ratio

**(Additional information on IOU financial program content and evaluation criteria have been included in appendix \_\_\_\_.)**

## **INFORMATION SOURCES**

Financial records of the water utility are the best sources of financial program information. Thus, the water system's financial advisor, investment broker, clerk or treasurer should be directly involved in establishing the financial program. All aspects of the financial program should be coordinated with and reviewed by utility management and policy makers prior to inclusion in the water system plan.

Information about water system grants and loans should be obtained directly from the agencies responsible for their administration. A listing of current agencies that may have funds available for water system improvements has been included in appendix \_\_\_\_.

Washington State - Small Water Systems  
Comparison of Funding Alternatives

FUNDING SOURCE	Description	Grant or Loan	Interest Rate	Percent Fundable	Limitations	Application Period	Availability
UTILITY Rates	Used to either cash finance or to pay debt service	N/A	N/A	N/A	N/A	N/A	M, P
Special Charges and Fees	Charges for growth and non-growth related activities and services provided by the utility	N/A	N/A	N/A	Charge is generally for capacity buy - in, on time & material basis.	N/A	M, P
Cash Reserves	Cash reserves used to partially or totally fund for operating and capital emergencies	N/A	N/A	N/A	Need to establish separate fund for each reserve.	N/A	M, P
Loan	Conventional loan from lending institution. Repaid from debt service thru rates.	Loan	Prime + 1 - 2%	60 - 80%	Debt Service coverage of 1.25 - 1.50 usually required along with other loan fees.	N/A	M, P
General Obligation Bond	Loans secured by tax base property tax or rates used to repay.	Loan	6 - 8% 20 - 30 Yr	100%	Voter approval annually required.	N/A	M
Revenue Bond	Loans secured by rate revenues.	Loan	7 - 8% 20 - 30 Yr	100%	No voter approval.	N/A	M
Local Utility District (L.U.D.)	Funding received by property taxes of benefited property. Repaid by a revenue bond may be paid by property assessments or from rates.	Loan	7 - 8% 20 - 30 Yr	100%	Voter approval required to form L.U.D.	N/A	M
STATE Public Works Trust Fund (PWTF)	Low cost loan for public works repair for current population	Loan	3% 2% 1% Up to 20 Years	90% 80% 70% 10% - 30% local match required... must be state grants.	Funding is not for growth related projects. Maximum CIP. Must pay 1% of total project. State Budget year. \$2.5 million per year.	April - July	M
Department of Health	Grant program for water system improvements.	Grants	N/A	50%	Focus on water quality and regional projects	N/A	M
FEDERAL HUD - Community Development Block Grant	Grant for public works improvements in low income areas.	Grant	N/A	N/A	\$750,000 annual grant limit to each qualifying county.	N/A	M, P
Farmers Home Administration	Loan and grant programs	Grant/Loan	N/A Variable	N/A	Must serve municipality or area less than 10,000 people.	N/A	M, P

Appendix

## Required Content of Financial Program

The following outline is intended to provide a summary of key elements that should be addressed in the financial program for investor owned utilities that are required to prepare and submit a Water System Plan (WSP) in accordance with WAC 246-290-100.

### I. Historical Financial Information

#### 1) Income Sheet for Last 3 Years of Operation

An income sheet measures the results of operation for a specified time period (usually one calendar year). This income sheet should include:

- A) Net Taxable Income=
  - a) Gross operating revenue MINUS
  - b) Costs of goods sold,
  - c) Depreciation, and
  - d) Overhead expenses.
- B) Net Earnings=
  - a) Net Taxable Income MINUS
  - b) Federal Income Taxes.

Any company net earnings may: 1) be used to pay stock dividend payments or 2) be retained in the company in the form of retained earnings. Retained earnings is a summation of past income statement ending balances.

This information is required in your annual report filed with the WUTC or in your federal tax return. The simplest format would be to show all 3 years of income statements by accounts on one sheet which allows side by side comparison of financial information for each account.

#### 2) Balance Sheet for Last 3 Years of Operation

A balance sheet shows the financial condition of a company at the end of a fiscal period (usually one calendar year). The balance sheet contains the identification of system assets, the value of these assets and the method used to finance these assets. Generally assets accounts are listed in the following order: utility plant, accumulated depreciation, special funds, cash, customer receivables and materials and supplies.

All assets identified in the balance sheet must have the amount of: 1) owner/company equity (e.g., stock issue, outside capital, cash from retained earnings), 2) owner/company liabilities (e.g., long-term debt, short term debt, payables, and taxes) and 3) customer contributions.

In addition to the discussion on past investment and contributed plant, all company assets projected in the capital improvement program in the future planning period must contain the expected level of equity, debt and contributed plant. Note, contributions can be in the form of plant or cash received from customers.

## II. Future Financial Planning Information

- 3) Projected cost of operation and maintenance activities for planning period
- 4) Projected costs of capital improvements identified in WSP Capital Improvement Program Section
- 5) Proposed financing mechanisms (i.e., borrowed money, owner or other party invested capital) for each capital and non-capital improvement
- 6) Anticipated revenue from existing and proposed rates and related charges with impact analysis of any proposed rate increases

## Criteria Used to Determine Financial Viability of an Investor Owned Utility and the Feasibility of an Investor Owned Utility's Financial Program

This document is intended to provide a summary of key elements that the Washington Utilities and Transportation Commission (WUTC) use to determine 1) the financial viability of an Investor Owned Utility (IOU) and 2) the feasibility of the financial program contained in an IOU Water System Plan (WSP).

The Department of Health (DOH) and the WUTC have agreed that upon receipt of a WSP from an IOU, DOH will forward a copy of WSP to WUTC for a review of the financial section. WUTC review of the financial section of the plan assumes that Operations Program<sup>1</sup> and the Capital Improvement Program<sup>2</sup> is satisfactory. If either of these programs requires amendments, the financial review by the WUTC will be repeated once the WSP deficiencies have been addressed.

### IOU Financial Viability

The DOH defines Financial Viability as the ability of an IOU to obtain sufficient funds, on a continuing basis, to cover the total cost of developing, constructing, operating, and maintaining a company in compliance with Federal, State, and Local drinking water requirements.

### Financial Plan Feasibility

The financial Program of an IOU WSP will be determined to be "feasible" if that program reflects a company's ability to provide sufficient quantity and quality of water service for the planning period.

The DOH and the WUTC staff have generated a four section test to make these determinations. The same test will be used to determine the company's existing financial viability and the company's financial program feasibility. This four sections test follows:

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<sup>1</sup>Operations Program documents system activities that result in proper and efficient operation of a water system. Many of the functions are required by DOH.

<sup>2</sup>Capital Improvement Program contains improvements that the system intends on completing for a given planning period. These improvements can be voluntary or mandated by DOH drinking water regulations (WAC 246-290).

Four Section Test

1. Positive Annual Income
2. Positive Retained Earnings
3. No Outstanding Agency Orders
4. Capital/Asset Ratio

## 1. Positive Annual Income

**Financial Viability Determination** The company's income sheets must have resulted in positive annual income for 2 out of the last 3 years of operation . A company may still be determined financially viable if there has been an isolated negative annual income occurrence if, 1) the company has a sound financial history, and 2) the cause of the deficit is explained and corrected.

**Feasibility Determination** The company's projected budget must demonstrate positive annual income for the future planning period. A company may be allowed an isolated exception to the positive annual income requirement if the cause of the exception is justifiable and correctable.

## 2. Positive Retained Earnings

**Financial Viability Determination** Retained earnings is a summation of past performances (annual income/loss) of a company. The company must have positive retained earnings for 2 out of the three years of balance sheet information submitted to be determined financially viable.

**Feasibility Determination** If the company demonstrates positive annual income for the planning period, the retained earnings should also reflect positive results.

## 3. No Outstanding Agency Orders

**Financial Viability Determination** The company must not have any outstanding agency departmental orders (DO) or unresolved notice of violations (NOV) for the last three years of operation.

**Feasibility Determination** A company is considered to be feasible in the future unless there is an outstanding DO or NOV. The company will lose its "feasibility" status if a DO or NOV is issued.

#### 4. Capital/Asset Ratio

**Financial Viability Determination** A company is considered to be financially viable if, in the company's last balance sheet, its capital asset ratio is equal to or greater than 30%.

Capital Asset Ratio =  $(TA - (CP + AD)) / TA$  = Must be = to or > than 30%.

Rate Base =  $(TA - (CP + AD))$

Where,      TA= Total Asset  
              CP= Contributed Plant  
              AD= Accumulated Depreciation

Capital Assets Ratio = Rate Base Divided by Total Assets

**Feasibility Determination** A company is considered to be feasible in the future if, 1) they continue to maintain the 30% capital asset ratio, or 2) they are making progress towards achieving the minimum 30% capital asset ratio.

If you have any further questions concerning this material please contact Jim Ward of the Washington Utilities and Transportation Commission at (206) 753-2229 or one of the Department of Health planners listed below.

Rich Siffert, Planning Program Manager (206) 753-4299, Headquarters  
 Richard Rodriguez, Planner (206) 587-5619, Northwest Region  
 Michele Vazquez, Planner (509) 456-2774, Eastern Region  
 Peter Beaton, Planner (206) 664-9698, Southwest Region

## Review Procedure for Investor Owned Utility's Water System Plans

The following procedure is intended to provide a summary of key actions that should be completed by Department of Health (DOH) and Washington Utilities and Transportation Commission (WUTC) staff concerning the review of investor owned utilities Water System Plans (WSP).

### GOALS:

- I. Establish procedure between Department of Health (DOH) and Washington Utilities and Transportation Commission (WUTC) staff on:
  1. transmittal of IOU Draft Water System Plan (WSP) to WUTC for review;
  2. transmittal of WUTC staff determination of 1) the Financial Viability of an IOU company and 2) the Feasibility of the financial chapter of an IOU's WSP to DOH;
  3. coordination of WUTC and DOH comments to be compiled in a DOH WSP review letter;
  4. establish DOH and WUTC regulatory duties based on WUTC determination of the Financial Viability of the IOU and the Feasibility of the financial chapter of the IOU's WSP.
  5. approval of WSP

### PROCEDURE TO COORDINATE JOINT DOH AND WUTC REVIEW OF IOU WSPs

1. Upon receipt of three (3) IOU draft WSPs, DOH planner will forward copy of plan to WUTC staff for review. Transfer letter will also request WUTC staff to state any problems regarding system reliability and performance, customer service or other issues that should be addressed in WSP.
2. DOH and WUTC staff review IOU WSP independently. WUTC sends DOH planner comment letter within 30 days.
3. WUTC makes the following declarations in their review letter:
  - A. Company is either financially viable or not financially viable at present time based upon four



section test<sup>3</sup> applied to system's last three years of operation.

B. Company's WSP financial Chapter is either feasible or not feasible for planning horizon based on a four section test.

4. DOH planner compiles DOH and WUTC comments and writes WSP review letter. Letter is sent to company with copies of letter sent to company consultant and WUTC.
5. Upon receipt of three (3) revised IOU WSPs, DOH planner will forward copy of revised WSP to WUTC staff for review.
6. Step two, three and four (2, 3 & 4) may be repeated if necessary.
7. All companies that have submitted their last revised WSP will be in one of the following four classifications. (See Following Table for Determination Implications)
8. Companies that submit revised WSPs that 1) are determined feasible and 2) satisfy all other WSP content requirements will receive an approval letter from DOH staff. If company is in the Non-Viable/Feasible classifications, additional requirements will be imposed.
9. Companies that submit revised WSPs that 1) are determined non-feasible and/or 2) do not satisfy all other WSP content requirements will be notified via a Department Action. A Departmental Action may include one of the following actions: Notice of Violation, Bilateral Compliance Agreement, Agreed Order or a Departmental Order.
10. If the Department Action results in a Departmental or an Agreed Order and if that Order is not complied with, DOH may 1) place the system on the inadequate list, 2) place the company in operating permit red category, 3) issue fines, and 4) petition the court to place company's system(s) in receivership.

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<sup>3</sup>For further information, see WUTC criteria on financial viability and WSP financial chapter feasibility.

## Financial Viability and Feasibility Determination Implications

System Classification	What is the DOH Response to Expansion Proposal?	What is DOH Enforcement Action	Does it Require WUTC Financial Review <sup>1</sup>
Viable/ Feasible	Eligible For Consideration If Consistent With Current Approved Plan	None	NO
Non-Viable/ Feasible	Eligible For Consideration If Consistent With Current Approved Plan	None	YES
Viable/ Non-Feasible	Not Eligible	Departmental Action <sup>2</sup>	YES
Non-Viable/ Non-Feasible	Not Eligible	Departmental Action <sup>2</sup>	YES

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<sup>1</sup>WUTC Financial Review consists of a review of the financial operation of a company. This review examines the company's annual income (historical and projected), retained earnings and its balance of contributed plant and investment. These reviews can be triggered by an annual review date, receipt of quality and quantity complaints by customers, or receipt of a security application which relates to improvements contained in a company's Capital Improvement Program.

<sup>2</sup>A DOH Departmental Action may consist of a Notice of Violation, A Bilateral Compliance Agreement, an Agreed Order, or a Departmental Order.

<sup>3</sup>Same as Footnote 3.

## Executive Summary

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Most Washingtonians take the availability of safe drinking water supplies for granted. But Washington's water systems are facing major changes. Because of the new federal Safe Drinking Water Act (SDWA) requirements and other state and federal mandates, significant new capital and operational costs will be incurred by the state's water systems by the year 2000. These new costs come on top of a major backlog of rehabilitation and replacement of existing facilities that is necessary to preserve and maintain the state's systems in proper condition. Many systems are also facing the costs of expanding their systems to accommodate new customers as Washington's population increases. These combined financial impacts will be felt by customers on systems from the largest to the smallest. They will be particularly burdensome on small systems. These small systems have fewer customers over which to spread the costs will mean the potential doubling or quadrupling of current bills.

These costs come at a time of state and federal budget deficits, when the prospect of new financial assistance to water systems is, at best, uncertain. They also come just as Washington's major grant funding program for water systems (the Referendum 27/38 program) has virtually exhausted its funds.

At the same time, water resource and water supply planning have entered a new and difficult period. The State's water resources are strained by competing demands for their use. Additionally, the Growth Management Act (GMA) is requiring even more systematic and comprehensive planning for the provision of drinking water to the State's residents.

Given these circumstances, the Department of Health (DOH) has undertaken a comprehensive assessment of the state's water system needs. This report reflects the results of that assessment.

## Introduction/Background

- Of Washington's five million residents, almost 80 percent (4.2 million) receive their drinking water from some type of public water system. The rest are supplied by individual wells.
- Washington has over 13,000 public water systems. Approximately 4,700 of these are subject to federal water quality regulations under the SDWA. These are known as "Group A" systems in Washington. The 4,700 Group A water systems are either "community systems" (serving residential populations) or "non-community systems" (such as those at schools, churches, campgrounds, and business).
- Of the 4,700 Group A systems, just under 2,400 are community systems. Of these, approximately 2,200 have fewer than 1,000 connections. The Environmental Protection Agency (EPA) and this report defines these systems as "small."
- "Large" water systems are defined as those with more than 1,000 connections. There are 170 of the large community water systems in the state, which provide water service to over 71 percent of the state's residents.
- Over 75 percent of the small community systems in Washington (under 1,000 connections) are privately-owned.

## Financial Needs

- All Group A systems were surveyed by DOH; more than 1,600 water systems responded, representing over 86 percent of the state's water system customers.
- The combined totals for capital needs for all federally regulated systems during 1993-

1999 are \$2.22 billion: (a) \$686 million for SDWA compliance, (b) \$831 million for rehabilitation/replacement, and (c) \$707 million for growth.

- The SDWA costs are only for known requirements. The EPA is required to continue promulgating rules on 25 new contaminants every three years, which will cause these costs to continue to escalate.
- The large systems will have about 80 percent of all the statewide capital costs.
- The small systems will have a total capital need for 1993-1999 of just over \$400 million, equally split between rehabilitation/replacement costs and new SDWA requirements. No costs for growth of small systems were included in the study.
- In addition to these capital needs, other costs identified in the study are \$106 million for increased operation and maintenance costs from new treatment facilities, \$99 million in increased monitoring costs required by the SDWA, and \$115 million in planning costs.
- Nearly half of the state's systems with groundwater (well) sources of supply will be required to add at least disinfection treatment. Customers on these systems with under 100 connections can expect their monthly bills to rise to \$50, and even higher if any other treatment is required for the water to address other contaminants detected.
- Existing state and federal loan and grant financial assistance programs have provided a total of approximately \$120 million to water systems during 1989-1992. They are expected to reach an annual level of \$44 million by 1999, which will not be adequate to meet the identified capital need.
- The DOH estimates, based on water system projections of available funding, \$917 million of the total \$2.22 billion projected capital need currently has no identified federal, state, or local source of funding.
- Water system financial needs are only a part of the large cumulative household financial impact from federal/state environmental mandates regarding land, air, and water quality.

## Financial Resources and Impacts

- Water system customers in Washington currently pay an average monthly bill of approximately \$12-17, depending on system size.
- The smallest Group A systems (down to ten connections) will be hardest hit by new federal requirements. Customers on these systems may see their monthly water expenses increase to over \$50, simply because of increased monitoring and other operational costs. Customers on systems with fewer than 100 connections may see their costs rise to over \$30 per month. These costs will increase significantly for systems required to add new treatment for their supplies.

## State Financing Alternatives

- A variety of independent system financing options are available, theoretically. However, their possible use is limited, particularly for small systems and privately-owned ones.
- The Office of Financial Management has convened a Washington Public Works Policy Group. This group is reviewing water system needs and financing alternatives within a larger statewide context of infrastructure needs, which will result in a report to the Governor by January 1993.
- Water system financial alternatives could include policy considerations particularly

related to water systems, including : (1) funding driven by health priorities, (2) possible grants for hardship and restructuring situations, (3) increased coordination with other state funding programs, (4) a State program to finance one-time assessment and monitoring costs for expensive tests for small water systems, and (5) financial assistance of some sort to privately-owned systems.

## Ownership/Management Alternatives

- For many small systems, the economics of properly operating a system in the future will require that they restructure their operations through changes in management or ownership.
- Approximately 70 percent of the systems surveyed, both large and small, responded favorably to the Needs Assessment by indicating a willingness to restructure in some way.
- For most small systems, it is more economical for them to physically intertie with a nearby system than to build new treatment facilities if they are less than one-half mile away; at least 20 percent of the responding small systems indicated that they fall in this category.
- An active program of restructuring will avoid the necessity of placing large numbers of failing systems into receivership, which would place the burden of their operation on county governments.
- The biggest obstacle to restructuring is the lack of funding for planning and for constructing physical interconnections between systems.

## State Administration Issues

- New SDWA requirements are increasing the administrative burdens on the DOH Drinking Water program, making it more difficult to retain primacy.
- Although new revenues from operating permits and fees will be coming to DOH, there is a need to find funding for local health departments in order to assure the continuation of their partnership in water system regulation.
- A key component of water system regulation for both existing and new systems will be the assurance of financial viability. DOH will soon implement financial viability criteria for new and expanding systems.
- The role of the UTC in the regulation of privately-owned systems needs to be more fully coordinated with general statewide water system regulation by DOH.
- Approximately 150 of the Group A systems in Washington are State or federally owned facilities, such as parks, military bases, and correctional facilities. The agencies responsible for them will need to identify the cost impacts from SDWA requirements, and develop financing plans for them.
- The DOH has identified its priorities for water systems in its Drinking Water Program plan, along with implementation strategies for financial assistance that focus on restructuring small systems and targeting highest priority needs.

## Special Policy Issues

- Water resources, particularly long-range water allocation decisions, remain a major focus and concern of the state's water systems, and should receive continued State financial support.

- More extensive use of reclaimed water will occur under guidelines for its use as irrigation or heating/cooling water that are being developed by DOH with other interested parties.
- Conservation is now required as part of the water system planning program, and is underway at more than half of the state's large systems, and should receive continued State financial support.
- Alternative technologies for certain types of treatment offer the potential for some financial relief, particularly for systems in surface water that will have to filter their supplies. However, this option is conditional upon the State maintaining its authority to flexibly apply SDWA requirements.
- The Growth Management Act will have a significant impact on water system development, particularly under its requirement of a demonstration of adequate supply before building permits may be issued.

## Conclusion

New challenges face water systems and the water system regulators in Washington at State and local levels. With the major impacts of the SDWA coming rapidly, solutions to a host of needs and problems must be identified, and funding for them assured.

Mr. SYNAR. Mr. Ellis, good morning.

**STATEMENT OF WENDELL ELLIS, OWNER AND OPERATOR,  
QUAIL CREEK WATER SYSTEM, SPICEWOOD, TX**

Mr. ELLIS. My name is Wendell Ellis, and I am the owner and operator of a very small water system called the Quail Creek Water System near the central Texas community of Spicewood, TX. Since the system had the potential for more than 15 connections, it was classified as a community water system, under the regulations of the Texas Department of Health and the Texas Natural Resources Conservation Commission.

Through chemical analysis performed by the Health Department lab, tests revealed a total of 8.9 picocuries per liter of radium 226 and 228. The contaminant level for radium being 5 picocuries per liter, all systems exceeding that level were asked to comply with the 5 PCi levels or less.

With the State having no history, they knew chemically how to do it, but they had no history of the removal of the radium from the water. A pilot program was proposed to the Small Water System Initiative conference representative, a big word. Our system was selected by EPA as a demonstration site to prove the successful removal of radium from drinking water. EPA requested bids from unknown numbers of water conditioning firms with Kinetico Inc. of Newbury, OH, as the successful bidder. Kinetico's Round Rock, TX, dealer came to my site and installed the necessary ion exchange system. Their personnel provided monthly monitoring reports to the TNRCC as well as the salt to operate the system. I received basic technical assistance for the daily monitoring of the operation of the equipment.

All equipment operated successfully in removing the radium from the water, with little maintenance on a daily basis.

Now, the cost of operating the equipment is another matter. Figures for the entire time of the demonstration were compiled and a comparison of previous-year figures for electric bills showed a substantial increase. All figures from Kinetico showing amounts of salt used were given to EPA.

The final report from EPA showed during the demonstration that Quail Creek Water System's annual water sales to customers amounted to \$4,150. The cost to operate the system for that same time was a total of \$4,687. It is readily seen that it cost \$537 more to operate the system than was received in revenue for the entire period of reporting.

We looked at all options, such as nearby water systems and other sources to obtain water. Alternative treatment technologies seemed to be the most economically feasible way to go and better than the cost involved to operate full-scale treatment facilities.

I would recommend to EPA that they proceed immediately with some form of funding or grant money through State water commissions to assist the many small community water systems who are trying to stay—and I say "trying to stay"—in compliance with EPA Safe Drinking Water Act.

Mr. SYNAR. Thank you, Mr. Ellis, and thank you for coming to Washington.

How many service connections and customers do you have on your system, Mr. Ellis?

Mr. ELLIS. Eighteen at this time.

Mr. SYNAR. How many people is that?

Mr. ELLIS. Sixty-one.

Mr. SYNAR. You were selected for EPA's alternative technology demonstration project because of the high levels of radium in the drinking water, correct?

Mr. ELLIS. If it was high levels, it is 8.9 against a contaminant level of 5.

Mr. SYNAR. So that is why you were picked?

Mr. ELLIS. Yes, sir.

Mr. SYNAR. Has that alternative technology been able to get the radium levels below the EPA standards?

Mr. ELLIS. Yes, it has.

Mr. SYNAR. Who paid for that alternative technology and how much did it cost?

Mr. ELLIS. I am not sure who paid who, but Kinetico, Inc. donated the equipment and all of the technical knowledge to operate, as well as the salt to operate it for the entire length of time. And they estimated that the cost of the equipment that they donated to me, after the demonstration was over, to be \$6,200.

Mr. SYNAR. Mr. Ellis, you told us when we were interviewing you for this panel today that you are having a hard time affording the salt; is that correct?

Mr. ELLIS. That is correct.

Mr. SYNAR. You can't afford it?

Mr. ELLIS. I can't afford it.

Mr. SYNAR. I hear you.

Mr. ELLIS. I have an invoice in my briefcase of the last purchase I made—in other words, for one last palette of salt—and it was \$265 and some few cents, and that will last 25 days.

Mr. SYNAR. What are you going to do after that?

Mr. ELLIS. I may go in violation.

Mr. SYNAR. I hear you. Would you agree that the EPA and the States should allow small systems like yourself to use alternative technologies instead of building full-scale systems?

Mr. ELLIS. Mr. Chairman, the alternative technology system is very much more economical than the full-scale four-method flocculation sedimentation filter basin, all that type of thing.

Mr. SYNAR. You couldn't have done a full-scale radium program?

Mr. ELLIS. No way. Now the alternative program is working; it is working fine.

Mr. SYNAR. Is running this drinking water system your full-time job?

Mr. ELLIS. No, sir, I have other duties within my own subdivision, but I am the only operator at the system. But it is not a full-time job.

Mr. SYNAR. Did you receive any kind of training or get operator certification in order to run your system?

Mr. ELLIS. Yes, sir, I have a certified grade D operator's license from the Health Department in Texas.

Mr. SYNAR. Do you think it is a good idea to have small systems have certified operators?



Mr. ELLIS. Yes, I do, very much so.

Mr. SYNAR. Mr. Clark, your testimony noted that one of the foremost problems facing small systems in your State of Washington was the lack of knowledge on the part of system's owners and operators; and yet, Washington State exempts the owners and operators serving under 100 people from certification and training requirements.

Is it practical to expect that the small system operators get trained and certified? Aren't these the ones that need it the most, since they are the ones that are mostly in violation?

Mr. CLARK. Yes, sir, I would agree with you completely and we have identified that as one of the areas that we need to seek legislative authority to correct. But, yes, indeed.

Mr. SYNAR. You also mentioned that technical and financial assistance is sometimes not available to the private or investor-owned drinking water system. Is that a mistake?

Mr. CLARK. Yes, I think it is. I think there is a significant need on the part of those utilities and those folks to assist them in restructuring, and planning for capital improvements.

Mr. SYNAR. And one of the things that GAO told us is that the States lack reliable cost and performance data to determine alternative technologies.

Do you also agree that if EPA had some independent, third-party data source that that would help States?

Mr. CLARK. I think it would help, but I don't think it is the most significant factor and drawback in terms of the use of alternative technologies.

I think that a major area of concern is over what we call the appropriateness of the technology which requires extensive pilot testing even after you have demonstrated that the technology works. You still have to demonstrate that it works in that given situation, at least until you have widespread experience with the technology.

Mr. SYNAR. We talked about earlier that the Western States tried to get a protocol together with respect to alternative technology, but your experience is that only three States are following it, and most of them had to go back to the existing type of testing.

Do we need to develop a national protocol for this?

Mr. CLARK. I think we do. I think very definitely there ought to be some national program on protocol approval for manufacturers and suppliers to follow. And I think EPA, as well as the States and the industry are working toward that end.

Mr. SYNAR. One of the things that I have been most concerned about—and I think all of us who represent this great country, as well as our own districts are concerned about—is that we don't want to create a dual system, one for the cities and one for the rural areas, because our rural people demand that their drinking water be just as safe as their city cousins' drinking water.

Does that bother you, that we would create a dual system, if we had different standards and different certifications and different training?

Mr. CLARK. It doesn't trouble me if we are talking about a treatment technology in terms of a standard; but if you are talking about a numerical MCL, the quality of the water delivered to the

people, it does create a problem for me, and it does create a perception of a dual standard which is unacceptable to most States.

Mr. SYNAR. From the pride that you spoke about in your testimony, there is a lot the EPA and the Federal Government could learn from the Washington system, on how you put a viability program together, isn't there?

Mr. CLARK. Yes, sir, there is.

Mr. SYNAR. What do you think is the best lesson out of all of that?

Mr. CLARK. First of all, I think that in terms of the viability, financial part of it, that it ought to be not a mandated program. I am just very fearful about having another prescriptive program come to the States with inadequate flexibility that can be tailored to meet State needs and requirements. And I think we are opening up a whole area where the Federal Government simply should provide the incentive and provide the support for doing that, but they ought not to prescribe specifically how it is done.

Mr. SYNAR. How many States have taken the initiative, such as Washington State?

Mr. CLARK. I think Pennsylvania and Connecticut are two other States that have, in fact, moved ahead in that given area.

Mr. SYNAR. So 3 out of 50?

Mr. CLARK. Yes.

Mr. SYNAR. How do we get the rest of them to act if only 3 out of 50 have taken it upon themselves voluntarily?

Mr. CLARK. I think, first of all, there has to be a greater incentive to do so. And I think there has to be a recognition on the part of those States that there is an issue and a problem in the State, and I think EPA can provide that incentive for that State to take it on.

Right now, every State is burdened, and you have heard that in the GAO report and others, in terms of all the demands that are being placed on them right now. And financial viability in small systems is not a priority for the EPA to implement; and most of the States are following those priorities very religiously.

I think we have been fortunate in our State, because of the growth-related concerns, to be able to have addressed this issue.

Mr. SYNAR. GAO's testimony noted that the recent Federal share of the State program administrative costs are more like 35 percent, not 75 percent. How do you deal with that funding dilemma?

Mr. CLARK. I, first of all, agree that it is a real concern on our part. I think it is totally opposite of what we anticipate and interpret the Federal act to mean. We anticipated and we interpreted the Federal act to mean that this program would be a partnership effort, shared by the Federal Government and the States, initially envisioned as a 75 percent share from the Federal Government and 25 from the States.

We have accepted as a policy among the States that if we get a 50-50 share, that that would be suitable and a goal to shoot for. But the cost-sharing relationship that we have now, particularly with the mandates imposed on the States, creates a real dilemma and a problem of acceptability within the States.

Mr. SYNAR. It just basically passed the buck to the States?

Mr. CLARK. Yes, it is an unfunded mandate issue.

Mr. SYNAR. Mr. Ellis, do you believe in a user's fee as a way to do this?

Mr. ELLIS. I am not real sure I understand the user's fee—all of the technology involved in it. But my contention is that the small operator has enough fees tacked on him by the State and by every other, I guess, reporting firm, that they are about strapped—about as high as they can go right now.

Mr. SYNAR. If we allowed the small systems, such as yours, to tailor monitoring and testing activities for the contaminants that you knew were in the area, that would reduce your cost substantially, wouldn't it?

Mr. ELLIS. The chemical analysis that I get from the Department of Health in Austin, TX, tells me all of the levels of contaminants and what my system has in it. And in my case, the radium and 2 milligrams per liter of fluoride are the only ones that I am in violation of.

Mr. SYNAR. So of the 84 contaminants on the list, you have only 2 that are even risk factors in your system.

Mr. ELLIS. That's right.

Mr. SYNAR. So if you only had to test for those two, your costs would be substantially less today?

Mr. ELLIS. Yes, it would.

Mr. SYNAR. What if we said you had to test for the 85 one time as a base to find out if any were present, and based upon that base analysis and monitoring from that point forward, since you only have two that were really of any question—unless something changed, like a new industry moved in or you had some kind of catastrophe; that would be a good way to handle this, wouldn't it? In other words, have a good base, but from there on test for the ones that are most likely to be there? That would help, wouldn't it?

Mr. ELLIS. Yes, sir, because those conditions don't change.

Mr. SYNAR. Unless a new industry moves in or some other change takes place.

Mr. ELLIS. Or unless I drill another well and get into another contaminant.

Mr. SYNAR. You wouldn't mind retesting for all 85 again if you did that, right?

Mr. ELLIS. Not a bit.

Mr. SYNAR. It is the constant monitoring and testing for things that don't exist that are the expensive costs?

Mr. ELLIS. Yes, sir, and I have got reports here now of those that you talk about, and it is a 2-page report with little levels of contaminant acceptable levels.

Mr. SYNAR. Mr. Ellis, do you draw the water every time yourself personally or do you assign that test to somebody?

Mr. ELLIS. I do it myself; I don't have anybody to assign it to. When you are that small, I do it all. I take the water samples to the Health Department. This is a small system. I am talking about my wife—

Mr. SYNAR. Who does the billing?

Mr. ELLIS. My wife does the billing; I do the meter reading.

Mr. SYNAR. Do you get reimbursed for any of this?

Mr. ELLIS. No, sir, except what the customers pay. That is that \$4,150 that I talked about a while ago that I am giving away to operate the system.

Mr. SYNAR. You are indeed a point of light.

Mr. MICA.

Mr. MICA. Mr. Ellis, would you say that even if the Federal Government gave you a champagne system, you are operating on a beer budget, and it would be hard to keep it up? Is that correct?

Mr. ELLIS. It is under the present removal system that I am working under—the alternative system, as it stays right now.

Mr. MICA. Basically what you said, if I heard you correctly, that when your next supply of salt runs out, you are going to—basically, you may even abandon the system.

Mr. ELLIS. No, sir, I won't abandon the system; I will abandon the compliance.

Mr. MICA. Compliance.

Mr. ELLIS. Yes, sir, and it will go in violation until I buy more salt and get back into compliance.

Mr. MICA. But you can't afford the salt, right, to keep servicing those 18 people?

Mr. ELLIS. It is hard to afford it, yes, sir.

Mr. MICA. Mr. Clark, the problem we have with all of this is that the more we regulate from Washington, even when you supply a system and folks at the local level where the small systems don't have the wherewithal for compliance or even operation, the whole thing breaks down.

Is that what we are experiencing now?

Mr. CLARK. Yes, it is indeed. We find that most small systems, they are in noncompliance not because they don't believe in the law and the requirements.

Mr. MICA. So they need three things: flexibility from the Federal level; funds from the Federal level, if you want them to either operate or comply; and probably technical assistance wouldn't hurt either to be thrown in, or at least some technical certification programs or something.

If you had certain cost-effective technology available, that would be helpful?

Mr. CLARK. Yes. And time. Time, I think is the key element.

Mr. MICA. Is there anything else that we could do at the Federal level? I come from the school of thought that tries to keep the Federal Government out of your life as much as possible. Set some general parameters, provide some assistance where you set those parameters, and then stay out of folks' hair at the local level.

Mr. CLARK. Well, I think that the one area—and it gets into the standards area, but it is one that I hear a lot within my State, and that is the question of how clean is clean? And I think we have to be prepared—I, as a health official, have to be able to explain to people why we are asking them to spend money to clean up the water.

And if we can't defend that with good, scientific data and health-based data to support these requirements it is just a no-sell. It creates a real, real problem at the State level.

Mr. MICA. I think I will close with that.

Thank you, Mr. Chairman.

Mr. SYNAR. Thank you, Mr. Mica.

One other observation I might make. We think of these small systems as all being out in rural America like Mr. Ellis', but it is important to remember that half of the small systems in the United States are within standard metropolitan statistical areas [SMSAs]. And so we are not talking about remote areas of our country; we're talking about major geographical and population areas in our country.

Mr. Ellis, Mr. Clark, this type of testimony is very important and too often not heard, so I appreciate you both being here. Mr. Ellis, you and your wife, good luck; and hopefully you will find some money for some salt. Thank you for coming.

Our next panel is Mr. Robert Perciasepe, the Assistant Administrator for Water, U.S. Environmental Protection Agency. He is accompanied today by Mr. James Elder, Director the Office of Ground Water and Drinking Water.

If you would come forward, gentlemen, do either one of you have any objections to being sworn in?

Raise your right hand.

[Witnesses sworn.]

Mr. SYNAR. Your entire testimony will be made a part of the record. Mr. Perciasepe, we look forward to a 5-minute summary.

**STATEMENT OF ROBERT PERCIASEPE, ASSISTANT ADMINISTRATOR FOR WATER, U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC, ACCOMPANIED BY JAMES R. ELDER, DIRECTOR, OFFICE OF GROUND WATER AND DRINKING WATER**

Mr. PERCIASEPE. I will give it a shot.

Good afternoon and thank you very much. My name is Bob Perciasepe, as you mentioned. With me today is Jim Elder, the Director of the Office of Ground Water and Drinking Water at EPA. We are going to discuss EPA's response to the GAO drinking water report.

Mr. Chairman, I would like to applaud your leadership in this area of small systems. I know that you have done a lot of work in Oklahoma on looking at some of these issues.

I want to give a little background. There are about 58,000 community water systems, 87 percent of which serve fewer than 3,300 people. These systems serve approximately 11 percent of the population of the United States. Many of these systems have performance problems, as we have heard today, and I think I can characterize them in five areas: deteriorating physical infrastructure, inability to access capital for improvements, limited customer and rate basis, inadequate rates and poor financial management, and limited management and technical capability. I think we heard some examples of these problems today.

On the GAO observations and findings, I think the GAO report accurately presents the technical, financial, and managerial problems that small systems face in delivering a safe supply of drinking water to their customers and the problems that States face in dealing with these 58,000 small systems around the country. I think it identifies accurately some of the efforts EPA has been taking to work with the States to improve the capacity of small systems, and

it also discusses some of the administration's proposals to improve small system compliance with requirements of the Safe Drinking Water Act.

I think a central issue we need to understand is the cost to small system. We provided a report to Congress last fall that stated approximately 89 percent of the households in the country pay an average of \$1 to \$2 a month to comply with the Safe Drinking Water Act. These costs can increase to almost 10 times that amount in some small systems, and about 75 percent of all of that cost is the cost for filtering and disinfection and reducing lead.

And as you have heard today, monitoring can also be a substantial cost, particularly for small systems. We have given the States flexibility to reduce or waive monitoring where it is not needed. One of the struggles that we all have is, how do we get this to happen more so that we can reduce the cost?

There are over 21 States in the process of going through the waiver program and we are working with another 24 States. In fact, last week I personally met with the Governor of Nebraska in Omaha and discussed waiver processes with the State of Nebraska.

We think that this process can cut the cost of monitoring to over 50 percent of the systems.

I think we also need to work with States to prevent contamination of groundwater to begin with. If we are going to be looking at waiving monitoring costs, we have to make sure that there is another line of security; that is going to be the prevention side of it. Wellhead protection, as you mentioned, and groundwater protection programs are going to be important.

In order to comply with some of these costs, the administration has proposed that a State revolving fund be included in the Safe Drinking Water Act reauthorization, and we strongly support that proposal. I think it has already been brought up today that there are \$599 million in the 1994 budget and \$700 million in the President's proposed 1995 budget.

We're also recommending allowing EPA flexibility in setting compliance timeframes. Not only do we need funding and technical assistance, but we need more time to allow States to secure favorable financing and to examine cost-effective solutions and construction alternatives. Let me talk about those alternatives for just a moment.

GAO identified several problems that impede widespread use of alternative treatment technology that could reduce the costs of compliance. We have a small system technology initiative you heard about today. We have made available with our written testimony a list of some of the activities under this initiative that we are undertaking. They include things like demonstration projects, alternative design review protocols, and a technology information data base so that this information can be shared. This initiative has been helpful, but I think we can do more.

Let me talk about small systems technology. One of our key recommendations for Safe Drinking Water Act reauthorization is the development of a small system best available technology [BAT]. The small system BAT would provide a streamlined process for States to grant renewable treatment variances to eligible systems who install affordable technology or take other practical steps to

protect public health. The key here is setting up a system that creates the incentive for this to happen.

The demonstration projects and the approaches that we are taking now are all good, but they are only going to take us so far. Let's put something in place that shows the industry that is going to develop these technologies that we are serious about it and that provides a framework for us to work with the States to do it. We think that the State viability review also has to be part of that. Some of the States that are doing it were mentioned today.

I might add that before I took this job about 5 months ago, I was the secretary of environment in the State of Maryland, and the water program was under my jurisdiction. We had a viability program in Maryland that was quite helpful in keeping systems that were going to be unviable in the future from starting up.

We also recommend that States develop operator certification programs for all sized systems to make sure that the systems are properly operated and maintained. There are currently 45 States with operator certification programs. We encourage arrangements that are very diverse and flexible. I think the State representative brought up earlier, that we do not need to prescribe in detail how these systems would work, but we need to be able to consider a number of options such as look at circuit riders, contract operation and maintenance, and cooperation among neighboring communities to pool their resources.

We agree with GAO that the demand for technical assistance far exceeds the current capabilities. We need to continue working with the folks like the Rural Development Administration and the Department of Agriculture, the national drinking water organizations and other groups to provide small systems with financing and training. But more needs to be done.

Small system viability programs offer promising alternatives here, and it is noteworthy that after 2 years of discussions with all sectors of the drinking water community, GAO strongly agrees with us that States should develop programs to assess the viability of small drinking water systems and develop authorities needed to direct nonviable systems to restructure. This is totally consistent with our recommendations to Congress.

And, again, we are proposing that States design their own programs to correct these deficiencies and ensure that new systems are viable before they are allowed to operate. There is a widespread spectrum of restructuring options available to small systems; informal cooperative arrangements, sharing of staff, operational management services, contracting, ownership transfer, and things of that nature. We think that all of these things ought to be pursued in the program.

Mr. SYNAR. If you could conclude.

Mr. PERCIASEPE. Are we almost done?

Mr. SYNAR. Yes, we are done.

Mr. PERCIASEPE. We are done. OK. Well, I could end, but I wanted to mention three more things.

Mr. SYNAR. Thirty seconds.

Mr. PERCIASEPE. We have some recommendations in the Safe Drinking Water Act reauthorization proposal that would include some financing for States. Again, this has been brought up today.

We also recommend that source water protection programs be strengthened. And, finally, we recommend that the requirement for regulating 25 contaminants every 3 years be reformed and that EPA be allowed to select contaminants based on occurrence cost, and risk reduction benefits and that we would only regulate the contaminants that present risk to public health.

I think I would summarize by saying, Mr. Chairman, no single change in the Safe Drinking Water Act will solve these. We will need to do all of these things.

[The prepared statement of Mr. Perciasepe follows:]



TESTIMONY OF  
ROBERT PERCIASEPE  
ASSISTANT ADMINISTRATOR FOR WATER  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT, ENERGY, AND NATURAL RESOURCES  
OF THE  
COMMITTEE ON GOVERNMENT OPERATIONS  
U.S. HOUSE OF REPRESENTATIVES

MARCH 14, 1994

Good afternoon, Mr. Chairman and members of the Subcommittee. I am Robert Perciasepe, Assistant Administrator for Water at the U.S. Environmental Protection Agency (EPA). With me today is James R. Elder, Director of the Office of Ground Water and Drinking Water at EPA. We are here to discuss with you the U.S. General Accounting Office's (GAO) Report, Drinking Water: Stronger Efforts Essential for Small Communities to Comply With Drinking Water Act and the Administration's Safe Drinking Water Act (SDWA) reauthorization recommendations that target small systems.

Mr. Chairman, over the years, you have identified problems in the drinking water program and worked to improve the program. You are sensitive to the problems of small systems and gathered information on their problems by sponsoring a series of small system forums in Oklahoma during July, 1992. You also sponsored legislation during the 102nd Congress designed to help small underfunded systems cope with SDWA requirements without sacrificing drinking water quality. I applaud your leadership and commitment to identifying and responding to the key problems facing the Nation's drinking water programs.

**BACKGROUND**

Approximately 200,000 public water systems are covered by the requirements of the Safe Drinking Water Act (SDWA). A public water system is defined as any system providing water for human consumption to at least 15 service connections, or serving an average of at least 25 people 60 days per year. Community water systems are a sub-set of public water systems and provide water to the same population essentially year-round. There are approximately 50,000 community water systems, 87 percent of which serve fewer than 3,300 persons. These small systems serve 11 percent of the population. Most of the implementation and compliance problems occur with small systems, particularly those serving fewer than 500 persons.

The performance problems of small systems are not a recent phenomena; they have been well documented since the early 1970's. The most significant challenges small systems face include:

- o Deteriorating physical infrastructure -- in many cases, systems face the cumulative burden of decades of infrastructure neglect;
- o Inability to access capital -- most small utilities suffer numerous disadvantages that impede their ability to borrow at favorable rates and terms;
- o Limited customer and rate base -- many small systems were initially under-capitalized;

- o Inadequate rates and poor financial management -- small systems, on average, have higher rates than large systems, but many small systems do not charge enough to cover their full cost of service;
- o Higher unit costs -- a prevailing characteristic of water supply technology is that unit costs increase as capacity decreases;
- o Limited technical and management capacity -- many small systems are an incidental part of some other undertaking (such as managing mobile home park or a homeowner association) and have limited capacity to monitor the quality of their water or operate and maintain modern technologies.

Given these challenges, many small systems will be unable to provide safe drinking water, if their sources of drinking water become contaminated.

Today, I would like to provide you with our perspective on GAO's findings and recommendations and how President Clinton's Safe Drinking Water Act (SDWA) reauthorization recommendations focus on the problems of small systems. I have attached to my testimony information on the Agency's on-going programs for small systems, many of which are carried out with the assistance of States, water systems and national drinking water organizations.

## I. GAO OBSERVATIONS AND FINDINGS

The GAO Report accurately presents the technical, financial and managerial problems small systems face in delivering a safe supply of drinking water to their customers and the problems States face in supervising the operations of over 50,000 small community systems. The Report also identifies EPA and State efforts to improve the capacity of small systems, and identifies the Administration's proposals which should improve small system compliance with the requirements of the SDWA.

### SMALL SYSTEM COSTS

The GAO Report indicates that the costs of complying with the SDWA place an enormous burden on small systems in addition to their urgent need for infrastructure repair. We recognize that the costs of compliance with the SDWA are increasing. Our Report to Congress last Fall on the capacity of States and public water systems to implement current drinking water regulations<sup>1</sup> showed that, while 89 percent of U.S. households pay an average of \$1 to \$2 per month for SDWA compliance costs, average costs for households served by some small systems can be more than ten-fold higher. For current regulations about 75 percent of the costs are for (1) filtering and disinfecting to protect against bacteria and viruses; and (2) reducing lead in drinking water. Filtering and disinfecting provide significant health benefits by protecting 80,000 - 90,000 people from gastro-intestinal illness annually. EPA estimates that full implementation of the SDWA lead and copper rule will

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<sup>1</sup> U.S. Environmental Protection Agency. Technical and Economic Capacity of States and Public Water Systems To Implement Drinking Water Regulations. Report To Congress. Washington, D.C., September 1993. (EPA 810-R-93-001).

reduce the exposure of 156 million people to lead. Another 600,000 children will be protected from unsafe levels of lead in their blood.

To help systems comply with the requirements of the SDWA and to make infrastructure repairs, the Administration has proposed a drinking water State Revolving Fund (SRF). We strongly urge its enactment. In FY 1994, Congress appropriated \$599 million for the SRF; FY 1995, the President proposed \$700 million. However, without an authorization, these funds cannot be used.

For many small systems, the cost of monitoring can be substantial. SDWA regulations have a risk-based monitoring approach. Most of the monitoring is for tests to guard against bacteria, parasites and viruses. For chemical contaminants, periodic testing is required to ensure water is safe. We have given States flexibility to reduce or waive this testing where it is not needed -- for example -- if a pesticide was never used in a State or county, or where contamination is not anticipated.

We have on-going efforts to reduce the monitoring burden on systems. EPA has issued guidance and is funding workshops to help States make use of the SDWA's flexible monitoring waiver provisions. States with approved monitoring waiver programs can cut monitoring costs for some regulations by 50 percent or more. More and more States are developing waiver programs. Based on a survey of our Regional Offices, we believe that

States have tentatively approved or approved waiver programs and another 24 States are in various stages of developing such programs.

EPA is also working with States to prevent contamination of ground water sources of drinking water through wellhead protection. Currently 34 States and Territories have EPA-approved wellhead protection programs and an estimated 10,000 communities have initiated wellhead protection efforts.

The Administration has proposed more realistic compliance time frames (between 36 and 60 months, depending on the regulation) providing additional time for systems to obtain more favorable financing and to examine less expensive or more cost-effective construction alternatives. This is now virtually impossible within the 18 month compliance time frame of the SDWA. Realistic compliance time frames should save small systems money and save States money by reducing the number of systems out of compliance.

#### ALTERNATIVE TECHNOLOGIES

GAO points out the problems that impede widespread use of alternative treatment technologies that could significantly reduce treatment costs. Systems and State regulators lack reliable cost and performance information on alternative technologies, making it difficult to identify technologies that are affordable and meet specific treatment requirements. Also, because many small systems do not have trained operators, these systems cannot consider technologies that demand higher skill levels.

EPA's Small Systems Technology Initiative, described in the Attachment to my testimony, identifies and promotes the use of treatment technologies for small systems that are cost effective and for which small systems can easily provide or obtain dependable, competent operation and maintenance services. Included in the initiative are (1) five technology demonstration projects, (2) an alternative State design review protocol to assist States in reviewing alternative technologies, and (3) a technology information database. The database, located at the National Drinking Water Clearinghouse at the University of West Virginia, will provide general descriptions of package technologies, performance and cost information, and information on where the technologies have been installed.

#### SMALL SYSTEMS TECHNOLOGY

One of the Administration's key reauthorization proposals would allow small systems best available technology. This proposal recognizes that technology generally applicable for systems serving 50,000 to 100,000 persons may not be appropriate for systems serving less than 3,300. The proposal builds on existing programs designed to overcome the barriers of using alternative technology and package plants by providing reliable and comparable performance and cost data. If enacted, our proposal would provide EPA with the flexibility to determine national small systems best available technology (BAT). Small system BAT provides a streamlined process for States to grant 5-year renewable treatment variances to groups of eligible systems to install affordable technology. Such a treatment variance may require the system to take other practical steps to protect public health, such as an enhanced source water protection program and would require the acceptance by those served by the

water system of any alternative level of protection. Such an approach would provide a strong incentive for the development of innovative package treatment systems or multi-contaminant compliance technologies. The proposal should accelerate the variance process by providing States with the necessary performance data and systems with reliable cost information.

Systems would be eligible to apply to the State for a reasonable exemption if it cannot restructure and cannot afford any BAT. Before granting an exemption, the State would take into consideration: (1) the intended improvements in health risks; (2) the resources of the affected community; and (3) whether the exemption would pose an unreasonable level of health risk.

Our small system best available technology proposal also requires a State small system viability review to ensure that everything that can be done, is done, to meet the maximum containment level in the drinking water regulation. This will ensure that we do not, as GAO cautions, perpetuate a nonviable system and, inadvertently contribute to chronic noncompliance problems.

#### CERTIFIED OPERATORS

We also recommend that Congress require States to develop operator certification programs for all sized systems to ensure the system is properly operated and maintained. Although 45 States have operator certification programs, at least 15 of those States exempt



small systems. This provision would not require all community water systems and non-transient non-community water systems to have a full time employee dedicated to the operation of its water systems. Rather, the provision would require every system to have a qualified operator, for whatever period is appropriate each week or month, to ensure the proper operation and maintenance of the system. We encourage arrangements like circuit riders, contract operation and maintenance, and cooperation among neighboring communities.

#### TECHNICAL ASSISTANCE IS AVAILABLE BUT NOT ALWAYS EFFECTIVE

The GAO Report points out that the need for technical assistance far exceeds the amount of assistance available. The Report acknowledges that acute Federal and State funding shortages preclude additional assistance for training, operation and maintenance, and other needs.

We agree that the demand for assistance far exceeds our, and the States, current capabilities. Our current program leverages the expertise and resources of public and private organizations, but more is needed. We are working with the U.S. Department of Agriculture's Rural Development Administration to finance small systems water supply systems and wellhead protection programs which are particularly important for small systems. Approximately 85 percent of small systems rely on ground water. We are also working with national drinking water organizations to provide training and technical assistance and to develop useful tools, such as the "pocket guides" for operators on the SDWA requirements, including monitoring and testing, and sampling protocols. So much

more needs to be done, and should be done, but with constrained resources, we will need to be even more creative in utilizing the resources and expertise of other organizations.

#### STATE SMALL SYSTEM VIABILITY PROGRAMS OFFER PROMISING ALTERNATIVES

It is noteworthy, that after almost two years of extensive discussions with all sectors of the drinking water community, GAO strongly agrees with us that "States should develop programs to assess the viability of small drinking water systems and develop authorities needed to direct nonviable systems to restructure." This is totally consistent with our recommendation to Congress. It amazes me that you cannot operate a hot dog stand without meeting basic health standards; yet, we do not have State viability criteria for drinking water systems.

As GAO points out, no one approach will fix all the small systems' problems everywhere. The sheer number of small systems, overwhelms State resources and makes it difficult for regulatory agencies to address their unique problems.

Some States may face difficulties in getting State legislatures to pass restructuring authorities. Based on my experience in Maryland, I am very much aware of the political difficulties, but I also know that most of the State workload involves noncompliance among nonviable, small systems. In 1992, 77 percent of "significant non-compliers" nationwide

were serving fewer than 500 persons. States with have strong viability programs will save money -- their systems will be vigorous.

When we talk about the concept of viability, we mean the system's financial strength, as well as its technical and management capabilities to meet current and, future SDWA performance requirements. A number of assessment protocols have been developed with both quantitative and qualitative indicators of a system's technical, financial, and management capabilities.

The Administration is proposing that small systems viability programs would be a condition of State primacy. The proposal would have States design their own programs to correct systems' deficiencies. State viability programs should ensure that new small systems are viable before they are allowed to operate. The GAO Report identifies ways that several States control the formation of new systems.

Our proposal would also require States to assess the viability of existing systems over a period of five years and take steps to enhance the viability of systems needing improvement. There is a wide spectrum of options to improve small system viability, from informal cooperative agreements, to sharing of administrative staff and managerial and operator services, to contracting for operation and maintenance, to management consolidation and ownership transfer. In 1991, EPA published a number of documents to assist States and

water systems implement viability and restructuring programs (see Attachment). In addition, EPA held workshops to provide assistance on viability and restructuring programs.

Viability programs should include authority for the State to order consolidation of, or otherwise compel necessary restructuring of, non-viable, non-compliant systems. The objective of the viability assessment process is to encourage systems to voluntarily take the steps necessary to enhance their viability and achieve compliance. Analysis in EPA's Report to Congress suggests that approximately 50 percent of small community water systems would potentially benefit from some sort of restructuring.

## II. EPA RESPONSE TO GAO RECOMMENDATIONS

GAO recommends that EPA remove potential barriers to restructuring and work with the appropriate committees of Congress on our State small system viability proposal. We wholeheartedly support these recommendations. While the drinking water SRF will provide needed assistance to small systems, SDWA success also depends on expanded State programs. An effective, efficient drinking water program cannot be managed from Washington or from our Regional Offices. Therefore, we need to help States overcome their severe resource shortages. Sufficient State resources are key to making the drinking program work.

**USER FEE**

We reported to Congress last Fall a shortfall in States resources of \$162 million dollars for fiscal year 1993. The Administration's user fee proposal would assist States having trouble fulfilling their responsibilities due to insufficient resources. Under our proposal, States must be able to fully fund their drinking water programs, however they choose. EPA, in consultation with the States, would provide criteria for determining sufficient program resources for State drinking water programs. The resource requirements will vary among States. A State could meet their resource needs any way they choose, but fees would be one equitable means of raising additional program funds to carry out the existing and new SDWA programs, such as a State small systems viability program, development of monitoring waiver programs, or provision of additional technical assistance. If a State chooses to implement a user fee, these fees would be available solely for use in fulfilling that State's SDWA responsibilities. If a State fails to fulfill its primacy responsibilities due to insufficient resources from all sources, EPA would have the authority to withdraw primacy. In States where EPA is the primary enforcement authority, a user fee would take effect to cover the cost of EPA implementing the SDWA in that State.

**PROGRAM PRIORITIES/GRANT FORMULA**

In addition, the GAO Report recommends that EPA revise its drinking water program priorities to place greater emphasis on developing and implementing viability programs and revise its public water supply supervision grant formula to remove disincentives for States to consolidate water systems. As I have indicated, we believe State small system viability

programs are a critical component of a State's drinking water program. Our reauthorization recommendations clearly indicate our belief that substantial reform of the SDWA is needed. Thus, the most timely action is for Congress to enact our recommendations, including a requirement that appropriate viability programs be a condition of primacy. We will of course revise our Public Water Supply Supervision (PWSS) program priority guidance to make this effort a top priority of any further primacy requirements enacted.

As the GAO Report noted, the PWSS grant formula has five factors, including: the number of community water systems, the number of nontransient noncommunity water systems, the number of transient noncommunity water systems, the land area in square miles, and the population of the State. In general, the formula is weighted to provide more funding for States with more systems. In 1994, we revised the grant formula to stabilize funding levels at 95 percent of each State's prior year allotment. This financial floor or "safety-net" should mitigate any penalty that previously existed for States that consolidated their systems. As recommended in the Report, we plan to carry forward this approach.

#### OTHER SDWA REAUTHORIZATION RECOMMENDATIONS FOR SMALL SYSTEMS

Mr. Chairman, I would now like to move beyond the GAO Report and address other questions that you posed in your invitation letter. In discussing the GAO Report, I have covered most of our reauthorization recommendations. The remaining recommendations should also assist small systems.

**SOURCE WATER PROTECTION/POLLUTION PREVENTION**

Source water protection programs represent a cost effective investment in the future by providing short and long term savings, particularly for monitoring costs. Water systems covered by enhanced local source water protection programs would be eligible for tailored monitoring and treatment exemptions. Vulnerability assessments, in tandem with implementation of pollution prevention measures, provide a safety net for drinking water supplies, without placing the public at an unacceptable risk.

At least as important are the public health benefits of source water protection programs, which will guard against the uncertainties inherent in monitoring and treatment technologies, while ensuring equitable levels of protection for our rural, as well as, for our urban citizens. Source water protection will also help protect investments made in financing and physical restructuring of systems. Further, because many existing Federal and State resources will help support local source water programs, implementation costs for small systems will be minimized.

Implementation of source water protection programs also empower local communities to gain greater control over the protection of their water supplies. The environmental paradigm of pollution prevention opens many options and places responsibility for protecting water supply sources where it belongs -- with the local community.

### ENFORCEMENT REFORM

We believe that Congress should revise the enforcement provisions of the SDWA to make the administrative, civil judicial, and criminal enforcement authorities more consistent with other environmental statutes. Administrative inefficiencies should be reduced to improve compliance with the law.

### CONTAMINANT SELECTION

The 1986 Amendments to the SDWA require EPA to issue national primary drinking water regulations for 83 specified contaminants and for 25 additional contaminants every three years. This rigid "25 every 3 years" statutory requirement outpaces the Agency's ability to critically assess whether there are public health risks posed by thousands of contaminants that may appear in drinking water before developing regulations. Under the present statutory scheme, future regulations may not be aimed at the highest priority public health risks, potentially increasing the already significant regulatory burden on EPA, the States and public water systems with only marginal benefits. In times of constrained resources, EPA needs the flexibility and time to select contaminants for regulation that pose real public health risks.

As an alternative to the "25 every 3 years" mandate, the Administration recommends that EPA more thoroughly evaluate public health risks before regulations are developed. Congress should require EPA to periodically publish a list of contaminants that may need to be regulated based on available data. The list would be developed after considering the



recommendations of States, scientific experts and the public. If data were not sufficient to regulate these contaminants immediately, EPA would undertake the necessary studies to develop sufficient information on the health effects of the contaminant and on its frequency of occurrence and its levels in drinking water. We would use the information to determine whether a drinking water standard is necessary, based on risk to public health. Our proposal sets no mandatory quota for regulations. By regulating only contaminants that pose the greatest public health risks, States and water systems will be making the best possible use of limited resources.

### CLOSING

In closing Mr. Chairman, I would emphasize that the American public must trust their tap water. Polls show that 95 percent of Americans believe protection of drinking water is either extremely or very important, and would pay more for those assurances.

No single change in the SDWA will "solve" all the problems small system face. The President's recommendations are an integrated package. The package, as a whole, strongly supports small systems. The recommendations build on Federal, State and local program experience and on private sector expertise. They address the financial, technical and management problems of small systems without sacrificing health benefits. Our proposal includes a number of options from which States and systems may choose, depending on the problem. Strong support for small systems is provided through the drinking water SRF, source water protection programs, small systems best available technology, operator

certification, realistic compliance time frames, and State viability programs. These programs focus on solving the real problems of small systems -- and do so in a straightforward, ethical way.

Mr. Chairman, this concludes my statement. I am happy to answer any questions that you, and members of the Subcommittee, may have.

Mr. SYNAR. Thank you. Thank you. Thank you very much.

EPA does not have a stellar history in regulating contaminants. In fact, when Congress gave you the discretion to regulate the additional contaminants, the Agency only regulated one contaminant for 12 years. Now you are coming back to up Congress asking us for that same discretion to regulate the contaminants that pose the greatest risk.

I am all for that, but can you tell us how you are going to assure me that after 12 years we won't be right back where we were, which was where EPA fails to regulate at all?

Mr. PERCIASEPE. I guess I have two answers to that. First, we have regulated a number of contaminants since 1986. But second, and most importantly, we are recommending to Congress that we be required to look at a certain number every 3 years in a very open process, including the scientific community, States, and other interested groups and that there would be conscious and open decision about which ones would be regulated and not regulated, rather than just leaving it open to discretion.

I think it is an appropriate middle ground, where we are required to look at a certain number, but not necessarily required to regulate a certain number.

Mr. SYNAR. But based upon history, I shouldn't have a lot of confidence, should I?

Mr. PERCIASEPE. Well, I think that that old law doesn't require us to look at a certain number and make deliberate decisions about it.

Mr. SYNAR. Which is why we passed the 1986 bill.

Mr. PERCIASEPE. I think that is correct.

Mr. SYNAR. Some legislation, such as the bill introduced by Mr. Slattery and Mr. Bliley, suggests that you all should evaluate the current health data extensively before regulating the contaminants, then use a cost-benefit analysis to set safe drinking water standards.

Haven't we already tried that approach with other environmental statutes such as TSCA and FIFRA with disastrous results?

Mr. PERCIASEPE. I think the words "paralysis by analysis" have already been brought up. We certainly buy into the fact and are supportive of being more risk-oriented in the contaminants we would be regulating. And our proposal differs from that House bill in one important way. We want to take risk into account in selecting which contaminants we would regulate, but once we decide to regulate it and we have gone through the occurrence analysis and looked at the benefits that would be available, then we would regulate it based on the technology and the affordability tests.

This would get us in a zone, Mr. Chairman, where 89 percent of the people would be able to afford that protection. And then we're saying we need programs in place to deal with the other 11 percent of the population, small systems primarily, that address problems of how to get close systems into compliance and provide that kind of flexibility.

Mr. SYNAR. This whole risk-reduction benefit and its computation is a new science, is it not, in its infant stages? We don't know a lot about it?

Mr. PERCIASEPE. It is certainly an evolving science.

Mr. SYNAR. GAO told us that drinking water systems are expected to spend \$1 billion a year to comply with the 1986 act, but it is really about \$3 billion.

Can you tell us why the Agency didn't know that they were going to be \$2 billion off their estimates?

Mr. PERCIASEPE. I have to say Mr. Chairman, I am not familiar with those two different proposals. When was the \$1 billion proposed? Mr. Elder may have some—

Mr. SYNAR. How much does it cost to comply, Mr. Elder?

Mr. ELDER. The annual cost under existing regulations is \$1.39 billion.

Mr. SYNAR. And what was your estimate originally on that, that you thought it would take?

Mr. ELDER. I'm not sure there was an estimate prior to the one that we included in the Chafee-Lautenberg report.

Mr. SYNAR. GAO testified that you all made unrealistic assumptions about implementation costs, such as the fact that 70 to 90 percent of all the systems would be granted waivers.

What was the basis of EPA's assuming that, that those waivers would be granted?

Mr. ELDER. Now I understand your point. The criticism GAO leveled against the \$1.39 billion was that there were generous assumptions made on a rule-by-rule basis about how many systems would qualify for monitoring waivers. At this point, those assumptions have been borne out and that is why we are trying to do more to push the monitoring waiver program among the different States.

Mr. SYNAR. What are you doing to make it easier for States to adopt the waiver requirements?

Mr. ELDER. We have put out with the Association of State Drinking Water Administrators, documentation about the waiver programs that have been put forward by other States. We have conducted workshops and will conduct more this year.

Also, I just sent out a memorandum in draft last week for comment to stimulate the approval of monitoring waiver programs where they are justified.

Mr. SYNAR. You heard Mr. Clark say that it cost as much as \$50 to \$70 per month per household to do monitoring and testing. Shouldn't we try to see, as I suggested, maybe only monitoring for the ones that we are reasonably expected to find?

Mr. PERCIASEPE. I think we definitely agree with that. And there has got to be a little bit of quid pro quo there of having the appropriate safety monitoring in place to begin with to make sure that those contaminants aren't there. That is part of the upfront cost that was discussed earlier for States going through that process so that they can reduce the cost in the long run.

But it is an excellent buy, and I think the example that was given earlier by GAO, a \$400- to \$500,000 investment on the part of Wisconsin and saving near \$15 million a year in monitoring costs, is one that I point to as a very cost-effective investment. And we will definitely continue to encourage that.

Mr. SYNAR. Mr. Mica.

Mr. MICA. They gave me the low bid mike, here.

You were talking about the States' waivers, and you said—did you say you have already met and granted 21 States' waivers?

Mr. PERCIASEPE. No, I said that we were in the process of working with 21 States that are in some stage of their waiver process. I think two of them have gone all the way to completion, maybe three.

Mr. MICA. So that would leave 19 that you are still negotiating with?

Mr. PERCIASEPE. But they have some level of approval.

Mr. MICA. And 24 more?

Mr. PERCIASEPE. We're working with them to encourage them further. We have a large outreach program under way to encourage more of these applications.

Mr. MICA. Let me go back to the beginning a second. First of all, I don't want to blame you all for everything. Normally, I beat up on the EPA, but today, if you noticed, in my opening remarks when I said that this is a hearing that reviews the history of "much ado about nothing" that I gave EPA a little bit of credit.

Could you take that back to the Administrator, please?

Mr. PERCIASEPE. Yes, I will.

Mr. MICA. I did notice that while Congress has done almost absolutely nothing, I will say in the last few years, that EPA has undertaken a couple of areas. I noticed you also are working on a handbook?

Mr. PERCIASEPE. On the small systems? Yes.

Mr. MICA. What is the status? When are we going to see that date?

Mr. ELDER. By the middle of this year.

Mr. MICA. We're making a note of that. The middle of this year. June? July?

Mr. ELDER. July 1.

Mr. MICA. I like to create deadlines for the agencies.

Mr. ELDER. You are not alone, Mr. Congressman.

Mr. MICA. Well, if I stick around here long enough, I develop an institutional memory and that becomes very dangerous. It has already come into play twice now.

How many Spicewood experiment systems were there? Was it Spicewood?

Mr. Ellis, is that unique? Are there many of those out there?

Mr. PERCIASEPE. I think we have six, five or six.

Mr. MICA. How much are you spending in total?

Mr. PERCIASEPE. Excuse me?

Mr. MICA. How much you are spending in total?

Mr. ELDER. We are spending next to nothing. We are getting the manufacturers to donate.

Mr. MICA. But how much are you spending—\$10,000, \$100,000—within EPA?

Mr. PERCIASEPE. I don't know the answer to that.

Mr. ELDER. I would guess around \$100,000 including the research and development staff in Cincinnati looking at the performance of the technology.

Mr. MICA. What about certification projects? The fees that are being charged up to \$10,000, is that adequate to cover the costs?

Mr. ELDER. Do you mean the certification by a third party, by the National Sanitation Foundation, to prove the reliability of the technology?

Mr. MICA. Yes.

Mr. ELDER. We are not able to comment on that, sir.

Mr. PERCIASEPE. As to whether it is adequate for them.

Mr. ELDER. I assume they are not losing money on the proposition.

Mr. MICA. A couple of questions, since I don't have too much time, on the report.

On page 3 in the summary it says cost and performance data that the States need to assess alternative treatment technologies are not widely available. That is your responsibility, right?

Mr. ELDER. We are making it our responsibility.

Mr. MICA. Why not? You just don't have the money or resources or both?

Mr. PERCIASEPE. Where is that again, Congressman? On page 3 of the GAO report?

Mr. MICA. Yes. I am sorry, it is the very bottom paragraph, "A number of barriers prevent the wider use of alternative strategies." Well, that is one thing that, if you are paying attention, you need to be paying attention.

The next page 4, top, finish of that paragraph, it says the Agency's grant formula for providing States with funds to oversee compliance can provide a disincentive to consolidation. Can't you change that by yourself?

Mr. PERCIASEPE. Yes, and we have.

Mr. MICA. OK.

Page 5, is a part of a paragraph, and the second one—well, that is going to take too long to get into. Let's go down to several factors that impede wider use of alternative strategies. It says that there is a lack of reliable cost and performance data. Isn't that your responsibility, also?

Mr. PERCIASEPE. I must be on the wrong page or in the wrong report. Page 5 of the executive summary?

Mr. MICA. I have the draft; I am sorry. I am in the minority. I am lucky I get the draft.

Mr. PERCIASEPE. I am trying to keep up with you, but every time I turn the page—

Mr. ELDER. I have the draft.

Mr. MICA. One key barrier preventing wider use of alternative treatment technology is a lack of reliable cost and performance data.

Mr. PERCIASEPE. Right, that is the objective of the data base we are actively working on. One of the reasons that we're recommending that there be a small system BAT program in the statute is to encourage the entire data base effort to move forward. I mean, there is a certain amount of incentive that is needed, I think, for the industry as well as for the government.

Mr. MICA. But, isn't it your responsibility to develop the reliable cost and performance data to provide, so that people can make judgments?

Mr. PERCIASEPE. I think it is probably our responsibility to help do that. I wouldn't say it is our sole responsibility. It is also the responsibility of the States and the operators as well.

Mr. SYNAR. Let me interrupt you at that point, and we will come back for another round.

Let's talk about the reliable cost and performance data. You do agree that these cost-effective alternatives that States want to look at can only be done when we know that data, correct?

Mr. PERCIASEPE. I think so, yes.

Mr. SYNAR. And you will agree that helping States with that kind of data to evaluate that and equipment would help? You would agree?

Mr. PERCIASEPE. Yes.

Mr. SYNAR. GAO mentioned that the States don't trust the information that is provided by the equipment manufacturers because they obviously have an interest in the sale of their products. Why don't you all get an independent third party, like the National Sanitation Foundation, to evaluate those technologies?

Mr. PERCIASEPE. Well, I think an arrangement like that can be made.

Mr. SYNAR. Why aren't you doing it?

Mr. PERCIASEPE. I think we are starting to do that on some items, and that is part of the process that we're going through in these demonstration projects, using industry to help finance some of these demonstrations, while we would evaluate it with our Cincinnati lab.

I think there would be more of an incentive for everybody to do this if there is a statutory framework for doing small systems technology. I think one of the things that we have to recognize is that in implementing a small system technology or a package technology, whether it be point of entry or point of use or some small package plant, there has been a reluctance, I think, in the past, to certify by an engineer or someone that this will absolutely meet the MCLs. We also need the temporary variance process that we propose for the SBAT to provide the incentive and to remove the barriers of that uncertainty and that risk. And I think it would be a further encouragement if that would be allowed.

So I think that would help motivate the system.

Mr. SYNAR. But you do agree that we need to develop national standards and guidelines for these new technologies?

Mr. PERCIASEPE. I think it would be in everyone's interest to do that.

Mr. ELDER. Mr. Chairman, we are also willing to assume the burden of identifying what qualifies as a small BAT. At this point, we are relying on each State to make that judgment, and we see that as one of the key impediments to small BAT being more widely used.

Mr. SYNAR. And you also would agree with the proposition that we can't allow systems, whether they be large or small, not to have trained operators because if we don't, then we would be throwing bad money after good, wouldn't we?

Mr. PERCIASEPE. Well, there is always that possibility. The State I come from, Maryland, does have a certification program for both water and waste water systems. There clearly is a minimum training requirement. But as we have heard, it is not an absolute guarantee, but it does reduce the—

Mr. SYNAR. You understood what I said to the earlier panel. I am concerned about having a dual standard of protection in this country, one for rural America and one for city America. That is not the

goal of EPA by a different sets of standards or, "discretionary power," is it?

Mr. PERCIASEPE. No, we do not want to have a different set of standards. In fact, we want to have the same set of standards. We don't want to lower the national standards to accommodate the smaller systems either. We want to provide flexibility for States and small systems, as well as time and technical assistance for them to get into compliance.

Under the current law, 18 months after we promulgate an MCL, everybody has got to be in compliance. It is just impossible to do that with 50,000 small systems. There has got to be a way to do it gradually, but with the same goal in mind.

Mr. SYNAR. Does it make sense to tie the Federal financial assistance to the system's long-term viability prospects?

Mr. PERCIASEPE. I think that would be an important component, particularly with the SRF that we recommended. But also that there should be some long-term commitment and financing to get viable systems and maintain them.

Mr. SYNAR. GAO noted that 46 percent of the 58,000 community water systems that serve under 100 people are privately or investor owned. Do you think that these private or investor-owned systems should be eligible for technical and Federal assistance?

Mr. PERCIASEPE. I think that they are different in that they are not owned by the government. But I think that they would be able to avail themselves of this technical assistance and the certification programs as well as anybody else.

Mr. SYNAR. That would be a change in philosophy at EPA?

Mr. PERCIASEPE. Slight.

Mr. SYNAR. Yes. Your testimony notes, and I found it of great interest, that more technical assistance is needed; and yet EPA's budget for 1995 zeros out the money previously appropriated for the National Rural Water Association to provide circuit riders to give small systems technical assistance.

You know that I am a strong advocate of that program. So why didn't you fight to get it back in?

Mr. PERCIASEPE. Well, what fights occurred and didn't occur in the development of the President's budget will remain there. But let me just say that we propose the same budget that we proposed last year, minus the congressional add-ons. Even when you correct for that, the amount of money for the public water supply program did go up slightly.

And let me just—

Mr. SYNAR. But you understand what happens when you don't put money in your budget, don't you? You ruin your credibility with small systems, don't you?

Mr. PERCIASEPE. Let me amplify a little bit.

We have some fairly comprehensive proposals for reform to the Safe Drinking Water Act that would provide a Federal fee system to allow States to have more resources to provide this kind of technical assistance. And, in addition, in the SRF, we have a 4 percent set-aside for managing the State SRF and 1 percent for technical assistance.

Mr. SYNAR. But you are passing the buck to the States, Mr. Perciasepe. You are the backstop. You are not the funding.



Mr. PERCIASEPE. That is right. But if the SRF is allowed to be used by the States for technical assistance, the same work can be done probably more appropriately at the State level.

Mr. SYNAR. How many small systems are potential candidates for physical consolidation or shared management?

Mr. PERCIASEPE. In our viability review, approximately 50 percent could benefit from restructuring.

Mr. SYNAR. Would you agree that the viable small systems should not be forced to restructure simply because of size?

Mr. PERCIASEPE. You mean consolidate? I agree with that statement. If they are viable.

Mr. SYNAR. You would agree that nonviable small systems should be given an opportunity to make improvements such as implementing prevention pollution programs versus consolidation?

Mr. PERCIASEPE. There is an art involved here. There is no bright line that this system—

Mr. SYNAR. I am trying to get you pinned down—

Mr. PERCIASEPE. I see what you are trying to do, and I am trying to say that a nonviable or a potentially nonviable system will have to be looked at hard and long to determine how long we want to expend resources on that as opposed to some other kind of restructuring. I think there should be every opportunity to look at every alternative available and for a flexible system to do that.

Mr. SYNAR. Mr. Perciasepe, it is good to require States to have viability programs and for EPA to issue guidance on what they mean by viability, but the real need here is for hard cash, period. GAO noted that establishing the viability programs in all States would cost about \$5 million, which doesn't seem like a lot when you look at the potential cost savings to States and EPA. Will the Federal Government make this \$5 million available to assist the States or not?

Mr. PERCIASEPE. Our proposal is that there would be a fee system. We would hold the funding we have constant in the Federal budget. We would provide resources through a fee system to States so that they could have the flexibility of either using Federal funds or those fees for that kind of assistance as well as a set-aside on the SRF when authorized. The answer is yes.

Mr. SYNAR. I like that answer. This is a measley \$5 million that could solve a lot of problems.

Mr. PERCIASEPE. Agreed.

Mr. SYNAR. Mr. Mica, do you have any more questions?

Mr. MICA. Yes, Mr. Chairman.

In my overly generous mood toward EPA today I would like to give you the opportunity to respond—you were cutoff earlier.

There are two criticisms in the report. It doesn't matter what page. It says EPA has yet to, one, revise the priorities of its own drinking water program to place greater emphasis on developing and implementing viability programs. Sort of in conclusion, what do you want to say to that charge? And then we will get to the next one.

Mr. PERCIASEPE. Jim can answer that.

Mr. ELDER. Mr. Mica, I read that criticism in the report. I don't completely agree with it because the guidance that I issued in June 1992 was directed at priorities within existing regulations.

At this time, there is no statutory requirement for us to do anything on viability nor do we have any regulations pursuant to viability, so I thought that, were I to push viability harder at that time, it would have added to this issue about unfunded mandates. That is why we are seeking statutory change to have statutory requirement for viability and the financial backing Mr. Perciasepe talked about.

Mr. MICA. The second charge says, EPA has yet to work with Congress to ensure that the proposed requirement that States develop viability programs is accompanied by a detailed and realistic funding strategy for implementation.

Mr. ELDER. I believe that our package of recommendations that were presented in September do provide that strategy for making this work.

Mr. MICA. Would you see any reason why you couldn't exempt systems under 100—that serve under 100 if there were some general compliance regulations that States could enforce?

Mr. PERCIASEPE. Exempt them from what?

Mr. MICA. From Federal statutory requirements, monitoring, some of these other things.

Mr. PERCIASEPE. Yes, I think that I would be opposed to having a class of water systems that are totally exempt from having to go through some kind of viability process and some kind of an approach to getting on a small system.

Mr. MICA. Don't you have them anyway now, most of them, under 100?

Mr. PERCIASEPE. Do we have systems now that serve under 100 people that are not in compliance because current law says they have to meet these MCL's in 18 months? We want more time and more alternatives for how they do it.

Mr. MICA. They will be out of compliance in 18 months if they don't institute some fairly costly provisions, alterations.

Mr. PERCIASEPE. Whether they are costly or not I can't predict, but we have proposed to Congress that they be given more time and more flexibility.

Mr. MICA. I think you have probably broken this cost up for coming into compliance. How about the share that would be borne by the systems that serve 100 and under? Any idea what—is that most of the—

Mr. PERCIASEPE. In our report to Congress, the so-called Chafee-Lautenberg report that we released in the fall, shows some of the cost curves by system size. And you are correct. The costs do go up sometimes 10 times more—

Mr. MICA. Take Mr. Ellis. You gave him a system that costs \$10,000 and technical assistance and initial assistance—I am not sure how it was set up, but it was probably \$1,000 per subscriber. If you sent that bill—that is just the bill for instituting the system, not for operational costs for which he doesn't have the money—and you multiply that over the country you would look at some pretty astounding water bills to pass onto the consumer, wouldn't you?

Mr. PERCIASEPE. The numbers that he had, again, \$6,000 or so that he was talking about—\$4,000—most capital costs are amortized over time, and we are proposing a low or zero interest loan program so that they could amortize it over a long period of time.

The other things that we are proposing besides small systems BAT—and maybe that is not the right one. Maybe there is another we need to develop. If it does require salt maybe there is a way to do bulk purchasing by the States.

Mr. MICA. The other item would be some alternative technologies that could be certified. Would you be in favor of setting up some type of a program where you could do that and have the vendor pay a fee in a broader sense for some of these systems, point of use and point of entry, and also for small systems operation?

Mr. PERCIASEPE. In our proposal we are talking about a small system technology program that would give EPA the ability to look at technologies by system size, by contaminant, and it won't be excluded looking at point of entry and point of use.

Mr. MICA. But wouldn't that be kind of encouraging to the private sector to find those cost-effective solutions and to make products available, technical applications to resolve some of these problems?

Mr. PERCIASEPE. If the Congress makes it clear——

Mr. MICA. That is not part of any of the proposals I have seen, is it?

Mr. PERCIASEPE. Maybe we are talking past each other here, but I think our proposal is to give us flexibility to develop small systems, BAT. I think if Congress gives us that authority that will be a message——

Mr. MICA. But you don't have any money and didn't request any in that area, did you?

Mr. PERCIASEPE. No.

Mr. MICA. OK. Thank you, Mr. Chairman.

Mr. PERCIASEPE. We are waiting for reauthorization to have the authority to do it.

Mr. SYNAR. But you could have asked for it in the budget in anticipation of that, couldn't you?

Mr. PERCIASEPE. That is always true.

Mr. SYNAR. Should money for the SRF be made available to carry out its prevention programs?

Mr. PERCIASEPE. There is an interesting juxtaposition of the Clean Water Act and the Safe Drinking Water Act. In the administration's proposal on the Clean Water Act, we are also proposing watershed management programs that can dovetail with source protection programs under the Safe Drinking Water Act. And we would like to see flexibility in all the funding sources to provide more watershed and source water protection, particularly applying the clean water revolving fund to watershed projects as well as the Safe Drinking Water Act revolving fund to the treatment facilities.

Mr. SYNAR. Is that a yes?

Mr. PERCIASEPE. Yes.

Mr. SYNAR. Thank you. That is a change from your predecessor who in the spring fought the Energy and Commerce Committee, who wanted to do that very thing.

GAO noted that EPA has consistently underestimated the cost of regulation of the systems. You predicted that the funding will grow wider and wider, and they predicted the funding gap will grow wider and wider.

In your prepared testimony you say we need to help States overcome the resource shortages, and you recommend requiring States to obtain sufficient State resources. You go on to say, "provide criteria for determining sufficient program resources for State drinking water programs."

I have to say I think EPA is punting the hard decisions about the funding problems to the States, and I think if I brought Mr. Clark back up here he would tell you the same thing. Isn't that what you are saying in your testimony?

Mr. PERCIASEPE. Where did my testimony come from? About 40 States already charge some kind of a fee in their programs of one sort or another. We need to find what it is that we need for a primacy program in a more open and collaborative fashion with the States, including things that are clearly going to be cost-effective over the long haul.

Once we do that we need to look at a three-legged stool for that funding to stand on: State funds, Federal funds and funding from the people who will be directly benefiting from a good State primacy program, that is, the users of the water systems. There need to be some quid pro quos there that in coming up with the pennies a month that it will need to help fund that third leg of the stool, that the kind of waiver programs, the kind of viability tests that are going to reduce the long-haul costs, all those things have to be the quid pro quos—

Mr. SYNAR. You could be putting 75 in and you are putting in 35. Mr. Clark argued he would take 50/50. The point is that if you are so committed to administering this drinking water program why did you reduce the funding for the State drinking water grant in the budget proposal?

Mr. PERCIASEPE. Because we made these other proposals.

Mr. SYNAR. But based upon history States have it pretty right that you are not really committed to it on the funding end of it, or you are passing the buck.

Mr. PERCIASEPE. No. I think we are proposing to share the three-legged stool.

Mr. SYNAR. Your leg is coming out is the problem. Wouldn't a requirement that the Federal Government share equal financial responsibility for the program with the States address the problems that Mr. Clark talked about?

Mr. PERCIASEPE. Equal share. If you buy into a 50/50 cost and you go through the definition of what the shortfall is, \$160–\$170 million, the answer would be, if we shared it, 50/50.

Mr. SYNAR. Gentlemen, thank you. I invite you to stay with us for the last panel and get a total picture of where we are moving with safe drinking water.

Our final panel is Ms. Velma Smith, Friends of the Earth; Steve Levy, executive director of the Maine Rural Water Association on behalf of the National Rural Water Association; Erik Olson, NRDC; and Kathleen Stanley, executive director of the Rural Community Assistance Program, Leesburg, VA.

Do you have objection to being sworn?

[Witnesses sworn.]

Mr. SYNAR. Let me, first of all, thank you for being patient. We have been here for some time, but I think it is an important area.

Your entire testimony will be made part of the official record. Please summarize within 5 minutes.

Ms. Smith.

**STATEMENT OF VELMA M. SMITH, FRIENDS OF THE EARTH,  
WASHINGTON, DC**

Ms. SMITH. Thank you, Mr. Chairman. I will jump right in.

I think that there is one point that many of us here would agree on. That is, that the Nation is in the midst of a drinking water crisis. The genesis of the crisis is the point in hot debate.

As you point out, some look at this and say it has been brought on by overregulation. They believe that the problems we face can be addressed by weakening the Federal law and letting States and localities call the shots.

Friends of the Earth believes that the overregulation assessment is a grave misdiagnosis of a much more complex and long-festering problem. A crisis in drinking water has been building for many years.

In 1970, the Assistant Surgeon General warned of an immediate need in many localities for upgrading present water treatment and distribution practices.

In 1978, the national demonstration water project concluded that over 6.5 million Americans served by community water systems were using water that did not meet the 1970 Public Health standards.

In 1980, EPA concluded that many small systems did not meet drinking water standards because of serious financing or operating problems.

In 1987, the National Council on Public Works Improvement cautioned that many small water systems, as currently managed and operated, constitute a significant threat to Public Health.

New regulations adopted since 1986 have underscored these long-standing problems; they did not cause them. On the contrary, the amendments which pressed for an updated definition of potable may help to address significant weaknesses in the Nation's approach to the domestic water supply.

Attempts to deregulate will not cure the Nation's water ills. They may mask a few symptoms, but they will only aggravate the root causes of the crisis: the absence of a national commitment to safe reliable water supplies for all Americans; a lack of water system planning and coordination at the State level; and a long history of underinvestment in critical water infrastructure development and maintenance.

The Nation that boasts the best water in the world relies upon a water delivery system that reaches too few people and relies on thousands of tiny components, many of which are ill-equipped to deal with the broad range of current public health risks. There are too many small, nonviable drinking water systems.

We can and should do better. We believe Congress can change the reality by crafting solutions of several parts: one, a restructuring of the water delivery system—not an overnight overhaul but a deliberate push for physical or managerial consolidation of small, nonviable drinking water systems wherever feasible.

Some States such as Connecticut and Maryland have been leaders in this area. Others, including North Carolina, have not adopted comprehensive programs but have some success with consolidating nonviable systems. In some areas, it is the public utility commissioners that have been the innovators and the leaders.

Second, we need a much-improved triage system for identifying and correcting existing water system problems. This component relies on a mix of technical assistance and enforcement.

Third, as you have reiterated several times, we need increased investment in drinking water.

We also believe that there should be a clear priority for any Federal spending today to go toward reducing the number of nonviable systems. If over time the size of the regulated universe is made more manageable, then administrative cost savings can be realized and future Federal outlays can be targeted to needy communities.

We should target future assistance to communities which do not have the opportunity to consolidate. In fact, we believe that if we do the right thing it would be reasonable to consider helping very small, very needy systems with their operation and maintenance costs.

There should be a stronger integration of pollution prevention. The tools for enforcement should be made compatible with the Clean Water Act. System recordkeeping should be improved. And we believe Congress should shift a portion of the cost for monitoring from water users to polluters.

The Clinton administration proposal for reauthorization addresses not all of these points but much of what we believe is critical for drinking water reform. We support the proposal as a sensible proposition for reinventing how the government deals with assuring safe drinking water. We heartily endorse State revolving loan funds, and we agree that small system viability programs should be required as a condition of primacy.

We would also support a mandate for States to adopt a monitoring waiver program, not requiring that they grant all requested waivers but that they establish appropriate criteria and procedures for considering waivers.

I would like to conclude by saying that we don't believe that there should be dual standards. People in small areas or rural communities should have the same safety of water as large areas.

We also don't believe that drinking water is just a local issue. Unsafe tap water doesn't move from the kitchens of one home to the kitchens of another, but people move. And not since the advent of the interstate highway system, the growth of the airline industry or the development of 20th century commuting patterns has drinking water supply been a truly local issue.

Surely it makes sense for all of us to pitch in together to assure safe, dependable water all across America. We think that is what the administration's proposal is all about, and we hope that that will be what members of this committee choose to work toward.

Thank you, Mr. Chairman.

[The prepared statement of Ms. Smith follows:]



**Testimony of  
Velma M. Smith**

**on behalf of**

**Friends of the Earth**

**before the  
House Government Operations Committee  
Subcommittee on Environment, Energy and Natural Resources**

**March 14, 1994**

**The Safe Drinking Water Act**

Good afternoon, Mr. Chairman, Members of the Committee. I am Velma Smith, Director of the Groundwater Protection Project for Friends of the Earth. Friends of the Earth is a national, nonprofit environmental organization with affiliates in 50 countries across the globe. On behalf of Friends of the Earth, I thank you for this opportunity to testify.

As you know, your topic today is a critical one for public health protection. Studies by the Environmental Protection Agency and its Scientific Advisory Board have ranked drinking water in the top four environmental health risks facing the nation. In the words of the Director of the Pennsylvania drinking water program, our drinking water regulatory programs are "the 'last line of defense' to protect children and other sensitive populations from lead, synthetic organic chemicals, radon, and microbiological contaminants..."<sup>1</sup>

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<sup>1</sup>Marrocco, Frederick A. Testimony of the Association of State Drinking Water Administrators before the Subcommittee on HUD and Independent Agencies, Committee on Appropriations, United States House of Representatives, April 1988.

Unfortunately, however, though few would argue with the importance of drinking water, the nation has not backed up that priority with adequate attention and resources. Thus, today we find that many in this room and throughout the country would agree that the United States is in the midst of a drinking water crisis.

Rates of violations are exceedingly high and expected to go higher;<sup>2</sup> many water systems have for years operated without the financial or managerial capacity to deal with contingencies are complaining loudly about new safety requirements; and state bureaucracies are straining under shrinking budgets. The situation is grim.

Some look at this situation and argue that it has been brought on by "overregulation. These people believe that the 1986 reauthorization of the Safe Drinking water Act was the genesis of this crisis and that the problems we face can best be addressed by substantially weakening the Safe Drinking Water Act and letting the states and localities call the shots on how we judge the safety of drinking water from one community to the next.

But the "overregulation" assessment is a grave misdiagnosis of a much more complex and long-festering problem.

### A Long-Standing Problem

A crisis in drinking water has been building for many years, and without new programs to address long-standing problems, this crisis would have manifested itself -- at some point in time -- with water system shutdowns, rapidly escalating water rates, and declining water quality.

\* Over 20 years ago, the Assistant Surgeon General warned of an "immediate need, in many localities for upgrading present water treatment and distribution practices."<sup>3</sup>

\* In 1978, the National Demonstration Water Project concluded that over 6.5 million Americans served by community water systems were using water that did not meet the

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<sup>2</sup>According to data in EPA's Federal Reporting Data System (FRDS), during fiscal year 1991, nearly 28 percent of the community systems were in violation of the basic water quality requirements for which states were then reporting data to the EPA. According to the database, about 20 percent of the nontransient, noncommunity systems serving schools, factories and a variety of businesses violated the law in 1991.

EPA's compliance report does not provide data on violation rates among systems serving the travelling public, but the compliance picture here may be even worse. A 1988 audit by the EPA Office of Inspector General indicated major compliance problems with the so-called non-community water systems, which serve approximately 36 million people. The IG audit revealed that inventories of these systems were incomplete and that the data reported to EPA "was erroneous and substantially understated the extent of reportable violations." These deficiencies were found despite the fact that 45 percent of all reported U.S. waterborne disease outbreaks were attributable to non-community water systems.

<sup>3</sup>Bureau of Water Hygiene, U.S. Public Health Service, *Community Water Supply Study: Significance of National Findings*, 1970, reprinted by the Environmental Protection Agency, Office of Water Supply, 1975.



1970 Public Health standards.<sup>4</sup>

\* In 1980, EPA concluded that many small systems could not meet drinking water standards because of "serious financing and/or operating problems."<sup>5</sup>

\* And in 1987, the National Council on Public Works Improvement cautioned that "...many small water systems, as currently managed and operated, constitute a significant threat to public health."

New regulations adopted since the passage of the Safe Drinking Water Act Amendments of 1986 have underscored the persistence of these long-standing problems; they did not cause them.

On the contrary, the amendments to the Safe Drinking Water Act which pressed for a 20th century definition of "potable" may help to address significant weaknesses in the nation's approach to domestic water supply. According to the National Regulatory Research Institute, the long-term effect of the Act may be "positive," improving technical assistance, stimulating technological innovation and forcing much needed restructuring of the water supply industry. In the Institute's words,

*...deregulation in no way solves the persistent problems of small water systems and, in fact, may make matters worse by eliminating oversight as well as opportunities for authoritative intervention. Regulation can enhance survival by compelling utilities to improve their technical, financial, and managerial performance. Another important role for regulators is to promote restructuring of the water supply industry as opportunities arise to make it more efficient and ultimately more viable.<sup>6</sup>*

Attempts to "deregulate" or to redefine noncompliance into compliance will not cure the nation's water ills. While they may mask a few symptoms, they will only aggravate the root causes of the crisis:

- \* the absence of a national commitment to safe, reliable water supplies for all Americans;
- \* a lack of water system planning and coordination at the state level; and

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<sup>4</sup>National Demonstration Water Project, *Drinking Water Supplies in Rural America*, 1978.

<sup>5</sup>U.S. Environmental Protection Agency, Office of Drinking Water, *Small System Strategy for Public Water Supply Systems -- Safe Drinking Water Act*, interim final policy published for public comment, 45 FR 40222, June 13, 1980.

<sup>6</sup>Beecher, Janice A., Richard Dreese and James R. Landers, *Viability Policies and Assessment Methods for Small Water Utilities*, National Regulatory Research Institute, 1992.

\* a long history of underinvestment in critical water infrastructure development and maintenance.

As we enter the 21st century, the nation that boasts of the best water in the world relies upon a water "delivery system" that not only reaches too few people<sup>7</sup> but also relies on thousands of tiny components, many of which are ill-equipped to deal with the broad range of current public health threats.

Today, there are nearly 200,000 "public" water systems in this country, including close to 60,000 community water systems and approximately 115,000 systems serving the travelling public. Of the community water systems, the vast majority -- nearly 90 percent -- are small systems. In fact, over 37,000 systems are defined by EPA as "very small," serving 500 or fewer people.

### Small, Nonviable Systems

These small systems -- as documented by numerous reports -- account for a disproportionate share of Safe Drinking Water Act violations.<sup>8</sup> Small systems also appear to share disproportionately in some of the characteristics that contribute to this dismal compliance record: "deficient capital, unskilled management, slipshod accounting..., substandard water quality...."<sup>9</sup> For many small systems,

*[t]echnical problems drain financial resources and frustrate managers. Financial crises make technical and managerial improvements impossible. Managerial weaknesses aggravate technical difficulties and present a barrier to raising financial resources.<sup>10</sup>*

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<sup>7</sup>Many Americans simply do without drinking water delivered from indoor plumbing. The statistics backing up this grim reality are difficult to ascertain, but the 1990 census data indicate that over a million homes -- or approximately 3 million people -- lack complete plumbing. This statistic may overcount the number of homes without drinking water because it includes homes without indoor sanitary sewage facilities. On the other hand, the number may be low because it does not include homes with access to unsafe water sources, such as bored, uncased wells.

<sup>8</sup>In FY 1990, small drinking water systems accounted for a full 90 percent of the community water system violations. In addition, small systems accounted for 88 percent of what EPA terms "significant noncompliers," according to EPA's Restructuring Manual, December 1991.

Even beyond the problems which small systems may impose on their operators and their customers, there are additional difficulties small systems may be a thorn in the side of the regulator simply because they are so numerous and so needy. Many state water agencies are finding that they are spending up to one-half of their time on the problems of small water systems.

<sup>9</sup>Davis, Vivian Witkind, et al, *Commission Regulation of Small Water Utilities: Outside Resources and Their Effective Uses*, National Regulatory Research Institute, August 1984.

<sup>10</sup>Beecher, Janice Al, G. Richard Dreese and James R. Landers, *Viability Policies and Assessment Methods for Small Water Utilities*, National Regulatory Research Institute, June 1992.

In too many instances, the small water system operator steps into this cycle of frustration with a decided disadvantage: the water system is simply too small, too poorly designed or too poorly constructed to survive. Working from unrealistic estimates of need, the water system planners may have overbuilt or undersized system components, including storage, pumps, distribution lines or treatment operations. Inferior components may be subject to rapid deterioration or actually unrepairable; valves which allow the operator to isolate portions of the system during repairs may be missing; records on the location and status of the distribution lines may not exist.<sup>11</sup>

Lest anyone here presume you would have to travel to the coalfields of Appalachia, migrant labor camps, or sparsely populated lands of the western U.S. to encounter such systems, consider that about one-half of the "very small" systems are within the boundaries of the U.S. Census Bureau's Standard Metropolitan Statistical Areas (SMSAs).<sup>12</sup> Consider that in Washington State, regulators have found 40 percent of systems serving less than 1,000 people within one-half mile of another system,<sup>13</sup> that public utility regulators in the State of Connecticut likewise report a concentration of small systems in densely developed areas,<sup>14</sup> and that a review by Friends of the Earth of EPA and State of Mississippi data on water systems in that State shows a concentration of small systems serving fewer than 50 people in the more densely populated areas such as Biloxi and Jackson.

In other words, some systems tolerate poor economies of scale because they have no other choice. In some parts of the country, a small water system is the only feasible means of delivering potable water. But in many, many areas, water systems are small, not out of necessity but out of choice.

Some involved in this debate recognize the existence -- if not the location -- of these systems, and they argue that we must make regulations that these systems can live with. But discussions of "affordability" quickly reach the point of absurdity, when existing systems can ill afford to deal with distribution line breaks, burned out pumps, simple coliform testing or keeping rats out of a water tank.

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<sup>11</sup>McQueen, James R., "Takeover of Small Failing Water Systems," *Proceedings of the Annual Conference of the American Water Works Association*, 1991.

<sup>12</sup>U.S. Environmental Protection Agency, *Technical and Economic Capacity of States and Public Water Systems to Implement Drinking Water Regulations: Report to Congress*, September 1993.

<sup>13</sup>U.S. Environmental Protection Agency, *Technical and Economic Capacity of States and Public Water Systems to Implement Drinking Water Regulations: Report to Congress*, September 1993 and Washington State Department of Health, *Environmental Health Programs, Division of Drinking Water, Small Water Systems: Problems and Proposed Solutions*, 1991.

<sup>14</sup>Personal communications of Velma Smith, Friends of the Earth, with staff of the Connecticut Department of Public Utility Control.

And if we continue to focus the nation's drinking water debate on bringing definitions of water safety down to the lowest common denominator, then those who can afford to should sign up now for Great Bear or Poland Springs delivery and buy stock in bottled water.

### **An Agenda for Reform**

But Friends of the Earth believes we can and should do better. If we step away from what amount to ideological debates and instead examine the problem in full, we can invent new, creative approaches to bringing safe, dependable and affordable water to all Americans. We believe that Congress can change the current reality of failing drinking water systems in an age of growing pollution by crafting solutions of several parts.

First, a **restructuring** of the water delivery system. Not an overnight overhaul but a deliberate and reasonable push for physical and/or managerial consolidation of small, nonviable drinking water systems, wherever feasible.

Second, a much improved triage system for identifying and correcting existing water system problems. This component relies on a careful mix of **technical assistance and enforcement**; its success is fully dependent upon small systems remaining in the currently regulated community and retaining a compelling motivation to act to correct their deficiencies.

Third, **increased investment** in drinking water, with a clear priority for any federal spending today to go toward reducing the number of weak links in the nation's water deliver system. If, over time, the size of the regulated universe is made more manageable and the capacity of that universe to deal with new pollution threats and changing scientific information is improved, then administrative cost savings can be realized and any future federal outlays can be carefully targeted to needy communities. In our view, the most appropriate public policy would be to target future assistance to communities for which distance on a map or other simple facts of geography dictate reliance on a water system with disproportionately high per capita costs.<sup>15</sup>

In addition to these three priorities, we believe that there are other things a reauthorization of the Safe Drinking Water Act should seek to accomplish. There should be a stronger integration of pollution prevention and water protection into the drinking water program; the tools for enforcement should be improved and made more compatible with those available under the

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<sup>15</sup>As would be expected, the smaller the system, the more it may spend per person served. The Congressional Budget Office in *Financing Municipal Water Supply Systems*, May 1987, found the difference in capital spending for water systems significant: According to CBO, systems serving more than 1 million customers would spend an average of less than \$6.00 on capital improvements per person per year; systems serving between 2,500 and 5,000 people would spend close to \$40.00 per person per year. CBO also found that the economies of scale were greater for water treatment facilities than for distribution systems, with per capita expense for treatment averaging 95 percent less for the largest systems in comparison with the smallest systems.

Clean Water Act; system and state record-keeping should be improved; and -- if not during this reauthorization, then as soon as possible after -- Congress should shift a portion of the costs of clean water from water users to water polluters. User fees placed on the pulp and paper industry, for example, should be used to pay for dioxin testing where necessary, and fees on pesticide production should be used to offset the cost of pesticide monitoring for medium and small systems.

The Clinton Administration's proposal for Safe Drinking Water Act reauthorization addresses not all of these points but much of what we believe is the critical agenda for drinking water reform. We support this proposal as a sensible proposition for "reinventing" how the government deals with assuring safe drinking water for the nation.

It differs from some other proposals put forward, including the Slattery/Bliley bill introduced in the House, in that it focuses on what we believe are the critical implementation issues associated with the Safe Drinking Water Act. It leaves the Act's current standard-setting provisions in tact -- with the exception of how contaminants for future regulation will be selected. The Slattery/Bliley bill, the Nickles bill in the Senate and other proposals make major changes to the law's current standard-setting mandates, and in doing so focus attention away from the real problems with the provision of safe drinking water.

The Safe Drinking Water Act's approach to setting water quality standards is not broken; it should remain as written.

What is broken, however, is how the very structure of our country's drinking water delivery system. The United States relies on too many, too small drinking water systems. There is little in the way of planning or coordination when it comes to providing water in the U.S.

Water systems have been created "with little planning and little control at the state or any other level."<sup>16</sup> People in need of water have been bypassed by neighboring water systems; water systems with clearly deficient rate bases have been created not just in isolated rural areas but in close proximity to suburban water systems. And individuals without access to capital, to technical expertise or to basic accounting and management capabilities have entered the business of supplying water. "Small water systems," notes one report, "are reputed to have been abandoned, given away, and even lost in poker games."<sup>17</sup>

This haphazard approach to water delivery worked for a time for this country. But now the pressures of growing population, increasing water consumption and widespread pollution of surface waters and groundwaters have made the frontier system less than effective. When it

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<sup>16</sup>Davis, Vivian Witkind, *Commission Regulation of Small Water Utilities: Outside Resources and Their Effective Uses*, National Regulatory Research Institute, 1984.

<sup>17</sup>Davis, Vivian Witkind, *Commission Regulation of Small Water Utilities: Outside Resources and Their Effective Uses*, National Regulatory Research Institute, 1984.

comes to tap water, a 1994 policy of every man, every family, every subdivision for itself simply does not work.

### **State Viability Programs**

The federal government cannot fix this problem alone, but it can compel the states -- which have let the haphazard, frontier approach to potable water delivery prevail -- to begin a process of addressing the problem.

We support the proposal put forth by the Administration that would require each state -- as a condition of maintaining primacy over the drinking water regulatory program -- to develop a viability program. Such a program could look very different from one state to the next but all would share some common elements, including state authority to compel non-complying water systems to consolidate -- either through actual physical connections or through some form of managerial consolidation -- and to order water system takeovers, as appropriate.

In addition, states should be required to prevent the creation of new nonviable systems, except in those cases in which an undersized and potentially nonviable system is the only alternative for addressing public health problems in an existing community. They should develop criteria for evaluating viability and should assess the status of existing systems over an extended time period, perhaps on the order of 5 years.

We understand that the some state representatives have argued against such requirements, and some may argue that viability programs would be but one more unfunded mandate. As the General Accounting Office report which responds to the questions of this Subcommittee notes some of this disagreement stems not from a differing point of view on the need for restructuring but from a concern that states cannot afford to take on this task. We believe that this is something the states cannot afford not to do.

Consider, if you will, that the need for a viability program requirement grew not from the imagination of federal bureaucrats or even environmentalists but from a basic leadership failure at the state level. The states -- with a few notable exceptions -- have failed to exercise responsibility for water system creation and potable water delivery.

We see no option but to require the states to fill this gap and redress the situation that several decades of inattention has caused.

Restructuring is a long-range solution. It should be joined to other changes in drinking water policy that will help in the near term.

### **Small System BAT**

There are many, many small water systems which do not meet the most fundamental of potable water standards. The serious existing problems of these systems should not be left to

fester and grow worse over time. Obviously, however, for some systems there will not be a quick and easy solution to noncompliance problems. Variances and exemptions -- which provide for public notice and compliance schedules -- can offer a reasonable route for assuring that problems are not ignored but that economic realities are taken into consideration. However, while the law currently provides for variances and exemptions, those tools have not been used very widely. EPA can assist the states in making these options more workable by determining the Best Available Technology for small size systems as they issue new regulations. This would provide the states with a much-needed benchmark against which they can judge the appropriateness of interim measures that small systems which cannot consolidate, cannot utilize alternative water sources and cannot otherwise afford treatment to the standards would undertake. The Administration proposal calls for the Agency to issue small system BAT; we concur.

### **State Revolving Loan Fund**

The Administration proposal and its budget address another critical drinking water issue. The nation's drinking water problems can be traced, at least in part, to a remarkable stinginess in commitment of resources. The Administration deals with the historical lack of investment in drinking water with a modest proposal for a drinking water revolving loan fund.

We strongly supported the creation of this fund; we worked on behalf of appropriations for this purpose; and we are anxious for the enactment of a sound reauthorization bill that will allow the monies already appropriated to be spent. The amounts requested for the state revolving loan fund are not huge, but they can help to address pressing problems. We believe that the first priority for expenditures of these funds should be small system consolidation, where such consolidation is feasible. We would hope that over time, as more consolidation and more water system coordination occurs, remaining funds would be targeted toward those small systems which exist out of necessity rather than choice.

### **Technical Assistance**

We are also hopeful that EPA will heed the recommendations of the General Accounting Office heard here today and work to strengthen its program of technical assistance and technology transfer to small systems. We believe that the Agency should be credited with moving on this point over the past several years, but we agree that much more needs to be done. The collection and dissemination of reliable information about the cost and reliability of small system technologies is critical to improved water quality.

Friends of the Earth sees this technical assistance component as a complement not a replacement for improved enforcement under the Act.

### **Enforcement**

Federal law and state regulations can be rendered meaningless, when the regulated entity -- in this case the water supplier -- has good reason to believe that the law will not be enforced.

The meager resources devoted to Federal and state enforcement may have helped to create a long-standing perception that adherence to drinking water regulations was not necessary.

In this climate, thousands of water systems have violated standards, ignored monitoring requirements, failed to issue adequate public notice of problems and, in general, allowed water systems to fall into disrepair. Enforcement gaps also send a clear and troubling message to those who may wish to get into the water supply business. Prospective water suppliers who believe that enforcement actions are highly unlikely may choose to design and construct systems which "get by" in terms of start-up standards but which are unlikely to be able to operate in accordance with the law over the long-term.

Although the term enforcement may itself conjure up images of huge fines assessed against hundreds of small, struggling communities and local mayors dragged off to jail, neither scenario is necessary or even realistic.

Rather, a workable enforcement program can deal with specific violations on a case-by-case basis and create the climate in which operators and owners are deterred from falling out of compliance in the first instance. The threat of penalty payments is an essential component of any effective enforcement program, but effective enforcement orders need not always rely on after-the-fact fines. Administrative orders, for example, can deter future violations by stipulating that penalties will be automatically assessed for failure to monitor or meet deadlines in a particular compliance schedule. In addition, enforcement authorities could be written to allow the regulatory Agency to direct funds into an escrow account for meeting system needs in some cases.

Enforcement can be creative; it can offer the climate in which friendly persuasion becomes effective and technical assistance desirable. Enforcement and technical assistance, in our view, work together.

### Monitoring

Another area in which small systems are currently having difficulty in complying with EPA requirements is that of monitoring.

Friends of the Earth believes that much of the pressure for reduced monitoring by small systems is driven not just by the cost of monitoring but also by the misperception that small systems are not vulnerable to contamination. In reality, small systems may be among the most vulnerable, for in many cases, small system wells are drilled into shallow, water table aquifers that may be affected by many contamination sources, including unseen septic tanks and dry wells from local businesses in rural, unsewered areas.

Even in areas which are not heavily industrialized, common activities ranging from gas station operations to drycleaners can render huge volumes of groundwater unfit for drinking. In addition, even in areas in which "...no industrial activity has occurred in an otherwise agricultural



area, the potential for VOC [volatile organic contaminant] contamination cannot be automatically discounted.<sup>18</sup> The potential for synthetic organic contamination exists in these non-industrial areas, in part, because some of the so-called inert ingredients used in pesticide formulations include contaminants such as chloroform, carbon tetrachloride and trichloroethane. Thus, while the State of Nebraska was not expected to have significant VOC contamination, "results of statewide ground-water-monitoring programs indicate VOC occurrence comparable to other national and state surveys."<sup>19</sup>

To the extent that the monitoring contemplated by EPA's Phase II and Phase V regulations and by the unregulated contaminants monitoring requirements are actually collected and analyzed, our collective understanding about groundwater contamination and our ability to make more reliable predictions about the likelihood of contaminant occurrence in different settings should be enhanced. Where we cut back on monitoring, we cut back on improved knowledge and predictive abilities.

We believe that EPA's current regulations provide for a considerable degree of flexibility on monitoring, varying baseline and compliance monitoring schedules and adjusting frequencies between surface water and groundwater sources. EPA's regulations provide for use waivers and vulnerability waivers, and if a state chooses to adopt a waiver program it is clear that no community would be required to test for the exotic, never-used pesticide.<sup>20</sup> They might, in fact, end up with information about non-detected, exotic pesticides, but only because such pesticides were evaluated in the same screening test that was run to test for pesticides that were used in the area.

EPA has built on this flexibility in its reauthorization package and creates further incentive for source water protection by allowing greater monitoring flexibility for systems which are active in assuring that contamination sources are not likely to affect their water supplies. This is a useful dose of pollution prevention added to a program that has been focused nearly exclusively on treatment and remediation.

Friends of the Earth would further support a requirement in the Act that each state with primacy adopt a waiver program. We do not believe it would be productive to require each state to respond to any and all requests for waivers -- there may be many clear-cut cases in which a waiver from monitoring is on its face inappropriate. However, it would be useful for each state to craft a waiver program, in line with EPA guidance, that sets out the criteria and procedures

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<sup>18</sup>Mackay, Douglas M. and Lynda A. Smith, "Organic Contaminants," in *Regional Groundwater Quality*, edited by William M. Alley, U.S. Geological Survey, Van Nostrand Reinhold, 1993.

<sup>19</sup>Mackay, Douglas M. and Lynda A. Smith, "Organic Contaminants," in *Regional Groundwater Quality*, edited by William M. Alley, U.S. Geological Survey, Van Nostrand Reinhold, 1993.

<sup>20</sup>Note, for example, that the State of Wisconsin's \$450,000 investment in a state waiver program for organic compounds has saved that state's water systems approximately \$10.5 million in monitoring costs according to EPA's 1993 Report to Congress.

under which waivers may be obtained.

### **Not a Local Issue**

One last point, Mr. Chairman.

The strong implication left by some has been that the federal government should back away from setting national policy on drinking water safety. State and local governments should be left, for the most part, to deal with the local issue of water supply.

Drinking water safety is not a local issue. No, unsafe tap water does not move from the kitchens of one community to the kitchens of another. But people move, and not since the advent of the interstate highway system, the growth of the airline industry and the development of 20th century commuting patterns has drinking water supply been a truly local issue.

Where I live, I drink from one community supply, and that might be considered to be the local system in which I should have some say. But when I go to work five days a week or more, I drink from another community's supply, and perhaps, where my child goes to school or day-care, there is still another water supply. If my family vacations with distant relatives, spends summers on the shore or in the mountains, I care about the water quality somewhere else. And if I change jobs, my child changes schools or my family up and moves to another state, my "local" interests change again.

Surely, it makes sense for all of us to pitch in together to assure safe, dependable water across America? We think that that is what the Administration's drinking water proposal is all about, and we hope that will be what Members of this Committee choose to work toward.

Mr. Chairman, again, I thank you for the opportunity to testify and I am happy to answer any questions the Committee Members may have.

Mr. SYNAR. Mr. Levy.

**STATEMENT OF STEVEN LEVY, EXECUTIVE DIRECTOR, MAINE RURAL WATER ASSOCIATION, ON BEHALF OF THE NATIONAL RURAL WATER ASSOCIATION**

Mr. LEVY. Representative Synar and members of the committee, I am Steven Levy, executive director of the Maine Rural Water Association. I am here on behalf of the National Rural Water Association, a federation of 48 State associations, representing over 14,000 water and wastewater systems.

For the past 14 years, I have been in the field helping small water systems comply with the Safe Drinking Water Act. I appreciate this opportunity to discuss GAO report (GAO-RCED 94-40) and small water system compliance.

There are 2,682 public water systems in Maine, from 40,000 customers in Portland to the Dew Drop Inn restaurant with half a dozen stools. Public water systems include private companies, public districts, trailer parks, camps, campgrounds, and schools.

Of these systems, 150 are regulated by the Public Utilities Commission. Of these systems 40 percent have no full-time help, and 25 percent have no place of business. Starks, ME, just like Loco, OK, has no water district office. Rural water business in Maine, like the rest of America, takes place over the kitchen table with unpaid volunteers.

The majority do an impressive job. They responsibly provide safe drinking water at a low cost. Ironically, average water rates for microuilities are roughly half the average water bill for the State as a whole.

They do, however, have real problems with paperwork and understanding rules and regulations. It drives bureaucrats crazy—no one to answer calls or letters.

When you look at the compliance stats, the majority are for monitoring violations. Someone forgot to mail in the sample bottle. It is a violation, not to be condoned or excused, but it is correctable through training and technical assistance.

In order to come to grips with drinking water regulations, we must be able to distinguish between water quality situations where people can get sick and situations where systems do a poor job of sampling.

The SDWA amendments have increased the regulatory burden on public water systems. The growth in noncompliance is not the result of deteriorating water supplies. It is a direct result of increased expectations.

In terms of the GAO report, I make the following observations.

Alternative technology can provide a vital link in a small systems's ability to comply with standards. Maine Rural Water Association, in partnership with the University of Maine, was able to pilot seven slow sand filters for water districts and five bag filters for camps for under \$2,000 apiece. The money was raised by the individual utilities.

Alternative technology can provide affordable solutions. It stimulates compliance and saves money. If EPA can develop water quality standards and guidance manuals, it can provide more resources and guidance to analyze new technology.

Institutions such as land grant colleges and the extension service could also provide important support for this work.

With regard to technical assistance, although the numbers of noncompliers seems daunting, I am continually amazed by the ability of NRWA staff to solve compliance problems. More than anything, small water systems simply need someone to explain the requirements. It is a cost-effective and humane way to achieve compliance.

Adequate funding for small system capital improvements continues to be a major issue. The surface water treatment rule is crippling many of Maine's small towns. Unless adequate grant programs are established, many communities will be unable to comply.

One innovative solution we have used in Maine is to convert small private companies into public water districts. We then take advantage of Rural Development Administration grant and loan programs and bring these systems into compliance.

I believe this is known as restructuring. Money is typically the major impetus to restructure. In my experience I can say that, one, restructuring is typically the slowest and politically most difficult method to achieve compliance; and, two, restructuring will not solve compliance problems of most noncommunity systems and many small private water systems.

I am not saying it won't work. I am just saying that it is difficult and incredibly time consuming.

Finally, in discussing viability, one must first critically evaluate what is making systems nonviable. For example, if systems cannot afford monitoring costs, let's see if these costs are reasonable and justified.

Maine systems, like the rest of the country, were hard hit by phase II and V monitoring. With the help of an EPA grant, we established a compositing program for tests which reduced costs to \$335 per utility.

We tested over 200 small utilities for more than 70 contaminants. There was the potential for over 14,000 violations. In all that testing we had only one violation.

So before we attempt to restructure the small water supplies in America, we should talk more about exactly what is creating nonviable systems.

I want to thank you on behalf of Oklahoma Rural Water for your support for Oklahoma and National Rural Water systems.

Mr. SYNAR. Thank you.

Mr. Olson.

#### **STATEMENT OF ERIK D. OLSON, SENIOR ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL, WASHINGTON, DC**

Mr. OLSON. Thank you and good afternoon.

We agree with most of the evaluation that has been presented by the GAO and, in particular we agree that there's a need to evaluate and emphasize viability programs and to really identify meaningful strategies to pay for them—which has always been the downfall of these proposals.

We are releasing today, and are providing the subcommittee, with a report entitled "Victorian Water Treatment" that documents that over 90 percent of the water systems in the United States,

even the big ones, are using pre-World War I technology in order to clean the water, and that we cannot expect 21st century results with 19th century technology.

What is really an absurdity is that we have 200,000 public water systems in the United States. You cannot expect 200,000 public water systems to comply with any national drinking water requirements unless you have some kind of meaningful technical assistance and a program to consolidate or restructure the nonviable systems. There are 58,000 community water systems, and it is impossible to expect every one of them to comply unless there is some kind of technical assistance provided and meaningful viability programs put into place.

What are the health threats of the breakdown in compliance? We have documented, using State data provided to us by EPA, that over 28 million people in 1991 and 1992 got water that was more contaminated than the maximum contaminant levels. That is a lot of people. In addition, the microbiological threats are well documented. An estimate by several scientists with Centers for Disease Control concluded that about 900,000 people get sick each year from drinking contaminated water in the United States, borne out by the Milwaukee experience of over 400,000 illnesses.

Arsenic is in the drinking water of over 35 million people, and the current EPA standard, according to a recent study, presents a 1-in-100 cancer risk, which is staggeringly high. Trihalomethanes, which are very common contaminants, have been associated with over 10,000 cancers per year. Small systems are completely exempt from the standards for trihalomethanes. Those are all systems serving under 10,000 people. Radiation and lead are also common contaminants.

We have seven recommendations that we presented in our testimony for what to do about it.

The first is that we do believe strongly that we need a small system viability requirement as a condition of primacy.

Second, in order to fund that, to answer Mr. Synar's question, we believe that there is a need for funding at the Federal level which would be matched by State funding. And if the State does not have adequate funding, there should be a Federal backstop fee on water users that would pay for an adequate State drinking water program, including a viability program.

Third, we strongly agree that there is a need for a State revolving fund but that money should be used first to pay for restructuring, consolidation, use of alternative water supplies, source water protection to assure that we are not paying to clean up contamination that could have been prevented in the first place, and to pay for alternative BAT in those systems that cannot restructure or protect their water source.

Fourth, we believe strongly that we need an active alternative best available technology program for small systems at EPA. Essentially, EPA should be, when issuing standards, issuing a small system BAT for every contaminant.

Fifth, we believe that source water protection should be absolutely central to the entire program. Very often it is much cheaper to prevent the contamination than it is to clean it up afterwards.

Sixth, we feel there is a need for operator certification and technical assistance. The costs would be shared by the Federal Government.

Finally, we believe that both the States and the Federal Government should have the authority to require consolidation, restructuring or takeover of small systems that are not viable.

In sum, the answer is not to gut standards or to weaken health protection. The answer is not to have one set of standards for rural Americans and one set of standards for urban Americans, but to try to solve on a case-by-case basis the small system viability problem. Thank you.

[The prepared statement of Mr. Olson follows:]



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**STATEMENT OF ERIK D. OLSON  
SENIOR ATTORNEY  
NATURAL RESOURCES DEFENSE COUNCIL**

**HEARINGS ON THE PROVISION  
OF SAFE DRINKING WATER  
BY SMALL PUBLIC WATER SYSTEMS**

**BEFORE THE SUBCOMMITTEE ON ENVIRONMENT,  
ENERGY, AND NATURAL RESOURCES  
OF THE HOUSE COMMITTEE ON  
GOVERNMENT OPERATIONS**

**MARCH 14, 1994**

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## I. INTRODUCTION.

I am Erik D. Olson, Senior Attorney at the Natural Resources Defense Council, a national non-profit public interest environmental organization with over 170,000 members, which is dedicated to the protection of public health and the environment through law and science. Thank you for the opportunity to testify this afternoon on the important issue of the provision of safe drinking water by small public water systems.

We agree with the conclusions of the General Accounting Office's report being released today, Drinking Water: Stronger Efforts needed to Help Small Water Systems Improve Compliance (GAO/RCED-94-40). There is a serious problem of noncompliance with the Safe Drinking Water Act (SDWA) by small systems, and urgent action is needed to assure that the health of the public served by these small systems is better protected.

We also will discuss in our testimony a study NRDC is releasing today entitled Victorian Water Treatment Enters the 21st Century: Public Health Threats From Water Utilities' Ancient Treatment and Distribution Systems, which documents that over 90 percent of the big public water systems in the United States use outdated, pre-World War I technology for drinking water treatment, posing serious health risks to the American public; small systems likely have installed even less modern technology.

In summary, we believe that it is an absurdity that there are 200,000 public water systems in the U.S., including about 58,000 community water systems, the vast majority of which are small, and many of which will never be able to assure drinking



water safety or comply with the SDWA. We will outline the health threats posed by public water system contamination, the extent of serious noncompliance by these systems, the lack of enforcement against even flagrantly violating systems, the need for more aggressive action to prevent the creation of new nonviable water systems, and the need to resolve problems with existing nonviable systems. As is detailed later in this testimony, several actions are needed to address the small system problem, including:

1. Small System Viability Programs Should be A Condition of Primacy. The SDWA should be revised to provide that each state with primacy under the SDWA is required to have a small system viability program.

2. State Program Funding for Small Systems Initiative and Other Needs Should be Required to be Available. The SDWA should be amended to provide that each state has 18 months to establish its own financing mechanism that meets the fiscal needs of the state to carry out the state's primacy program, including the small system viability program. A federal user fee on water to pay for the primacy program should be imposed to carry out the these functions if the state doesn't meet this requirement.

3. State Revolving Loan Fund to Help Resolve Small System and Other Problems. A revolving loan fund for projects that will help needy PWSs comply with the requirements of the SDWA should be created, as proposed by the Clinton Administration. The top priority of this fund should be paying for the restructuring or

consolidation of systems that are having difficulty or will have difficulty complying with the Act's requirements.

4. Development or Identification of Best Available Technologies for Small Systems. In issuing standards, EPA should establish research, development, and demonstration programs to enable small systems to find technologies to enable them to comply with the standard. EPA should work with states to provide technical assistance to small systems so they can install those technologies.

5. Better Source Water Protection. As part of the primacy program, states should be required to develop a comprehensive plan to prevent the contamination of drinking water, establishing the roles and responsibilities of state and local governments for priority sources, and prevention rules or other mechanisms, as well as data management and public participation procedures.

6. Operator Certification and Better Technical Assistance. There is a need to assure that small system operators are given the training and technical assistance they need to come into compliance. Therefore, the SDWA should provide that all operators of public water systems be certified and trained by the primacy program in accordance with EPA guidelines, including small system operators.

7. Authority to Require Restructuring or Consolidation. EPA and states should have the authority to order consolidation, restructuring, and the ability to put abandoned or "basket case" systems into receivership.

## II. SMALL SYSTEM NONCOMPLIANCE AND RESULTING HEALTH THREATS.

### A. The Extent of Noncompliance With the SDWA.

As was documented in NRDC's September, 1993 study entitled Think Before Your Drink: The Failure of the Nation's Drinking Water System to Protect Public Health, data provided to EPA by state drinking water programs indicates that in 1991-92, public water systems violated the Safe Drinking Water Act over 257,000 times. This included 25,000 confirmed violations of EPA's health standards (called Maximum Contaminant Levels (MCLs)). The other violations included failures to comply with treatment technique requirements to remove or prevent creation of contamination, and failures to test water for contamination to assure its safety.<sup>1</sup>

Violations of the MCL health standards affected over 28 million Americans in 1991-92, and approximately 110 million people were served by systems that violated the treatment technique, testing, or reporting requirements during the same time period.

According to GAO's report being released today, about 90 percent of the community water systems in violation in 1991 were small systems, each serving fewer than 3,300 consumers. However, according to EPA data, 75 percent of the people served by water systems violating EPA's MCL health standards were served by large

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<sup>1</sup>Contrary to the allegations of some in the water industry, the vast majority of these testing and reporting violations were not minor "paperwork" violations. According to EPA data, 92 percent of these violations were "major"---such as an outright failure of the system to test for contamination during the entire compliance period.

or very large systems (those serving over 10,000 people each), as is documented in Think Before You Drink (p. 5). Thus, although it is clear the vast majority of systems violating the EPA rules are small systems, the vast majority of people drinking contaminated water are served by big systems.

In the face of this massive noncompliance, EPA and states take few formal enforcement actions. According to EPA and state data, less than one percent of the 257,000 known violations in 1991-1992 were subject to formal enforcement action.<sup>2</sup> No one believes that enforcement is the only answer to the problem, and most concur that more financial, managerial, and technical assistance to systems is important. However, the lack of enforcement has created a clear signal that noncompliance is not a serious matter--even for "significant non compliers" which have often been in violation and posing health threats for years.

#### B. Health Threats Posed by Drinking Water Contamination.

The implications for public health of the drinking water contamination problems are substantial. Many contaminants that are regulated are not adequately controlled under outdated EPA rules that are inadequately protective of public health. Weak state and EPA technical assistance or restructuring programs to assure compliance, and virtually nonexistent formal enforcement also contribute to the problems, as do loopholes exempting small systems from compliance with certain key rules. In addition,

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<sup>2</sup>Think Before You Drink, at 3-20.

many important contaminants found in over 100 million peoples' water are completely unregulated. A summary of a few examples of the problem illustrates the extent of the problem:

o Bacteria, Viruses, and Other Pathogens contaminate the drinking water of tens of millions of Americans. Scientists from the Centers for Disease Control have estimated that over 900,000 people get sick, and 900 may die, each year in the U.S. from drinking contaminated water.<sup>3</sup> The 1993 Milwaukee disease outbreak alone reportedly affected 370,000 to more than 400,000 people. As the Milwaukee disease outbreak and many other cases highlight, AIDS patients, the elderly, young infants, and people who have compromised immune systems, are put at greatest risk by these contamination problems, and in many cases have died from drinking water contamination. In addition to the widespread noncompliance with EPA's watershed protection, filtration, and coliform rules noted above, there are major gaps in the EPA drinking water rules for microorganisms that must be filled (for example, EPA rules do not control for cryptosporidium, the organism that caused the Milwaukee outbreak).

o Trihalomethanes and Other Disinfection By-Products (DBPs), which are formed when chlorine or other similar disinfectants are used to disinfect water that has not been treated to remove

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<sup>3</sup>Bennett, J.V.; Holmberg, S.D., Rogers, M.F., and Solomon, S.L.. "Infectious and Parasitic Diseases," in Amler, R.W., and Dull, H.B., Closing the Gap: the Burden of Unnecessary Illness (Oxford U. Press, 1987); see also, Rose, J., "Waterborne Pathogens: Assessing Health Risks", Health & Environment Digest, Vol. 7, no, 3, pp.1-6, June 1993.

organic matter before disinfection, are found in the drinking water of over 100 million Americans. A recent study by doctors from Harvard and Wisconsin published in a prestigious journal found that these DBPs are associated with 10,700 or more rectal and bladder cancers per year.<sup>4</sup> A major study by the New Jersey Department of Health with the assistance of the U.S. Public Health Service found that disinfection byproducts, at levels similar to those found in many drinking water systems across the nation, are significantly associated with major birth defects such as certain spine and neural disorders.<sup>5</sup> A previous study in Iowa reached similar conclusions about possible reproductive or developmental effects of chlorination byproducts.<sup>6</sup> While these studies of birth defects are not conclusive, they raise serious concerns about the safety of fetuses exposed to chlorination byproducts. The level of DBPs can be substantially reduced or nearly eliminated through the use of affordable modern treatment technology.

Despite the strong evidence that these DBPs pose serious risks, EPA has rules controlling only one class of them

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<sup>4</sup>Morris, R.D., et al, "Chlorination, Chlorination By-Products, and Cancer: A Meta-Analysis", American Journal of Public Health, vol. 82, no. 7, pp. 836-842, 1992.

<sup>5</sup>Bove, F.J., et al., Public Drinking Water Contamination and Birthweight, Fetal Deaths, and Birth Defects, U.S. Public Health Service and N.J. Dept. of Health, 1992; Bove, F.J., et al., Public Drinking Water Contamination and Selected Birth Defects, U.S. Public Health Service and N.J. Dept. of Health, 1992.

<sup>6</sup>Kramer, M.D., C.F. Lynch, P. Isacson, and J.W. Hanson, "The Association of Waterborne Chloroform With Intrauterine Growth Retardation," Epidemiology, vol. 3, No. 5, (September, 1992).

(trihalomethanes) only in large water systems--all systems serving fewer than 10,000 people are exempt from any controls of DBPs. New rules for DBPs, which are expected to phase in

controls for small systems, may not be issued until 1996.

o Arsenic in drinking water poses a major risk of cancer, according to recent studies of people who drink water contaminated with relatively low levels of this widely occurring drinking water contaminant. California state experts found that water containing arsenic at the level of EPA's current drinking water standard presents a risk of more than 1 cancer in every 100 people exposed--10,000 times higher risk than EPA's standard "acceptable" cancer risk of 1 in 1 million.<sup>7</sup> Over 35 million people in the United States drink water every day from their community water systems that contain arsenic at a level of over 2 ppb--which presents a very significant cancer risk (about one cancer for every 1000 people exposed).<sup>8</sup>

o Lead contamination of drinking water is widespread and a serious health concern. As is detailed in Think Before You Drink, EPA has found that lead in drinking water is one of the leading sources of lead in the bloodstream, typically contributing 20 percent of total lead exposure for an average person, but far more for some people, particularly some bottle-fed infants. Overall, EPA has found that controlling lead-

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<sup>7</sup>Smith, A.H. et al., "Cancer Risks from Arsenic in Drinking Water," Environmental Health Perspectives, v. 97, pp. 259-67 (1992).

<sup>8</sup>Ibid.; Think Before You Drink, at 20.

contaminated drinking water could reduce lead exposure for between 130 and nearly 190 million Americans. Lead in drinking water harms millions of children's health, and causes over 560,000 children to exceed the Centers for Disease Control's defined level of concern for blood lead levels. EPA also has found that in men, better controlling lead in drinking water could prevent over 680,000 cases of hypertension, 650 strokes, 880 heart attacks, and 670 premature deaths from heart disease. However, EPA's lead in drinking water rules allow water systems up to 23 years to get the lead out of their water, and exempts most public water systems (most noncommunity systems) from all lead controls.<sup>9</sup>

o Radioactive Contamination of drinking water, although a little-known problem, affects approximately 50 million Americans, yet most of these contaminants still are not regulated in drinking water. Radioactive contamination of drinking water is well documented as a cause of various forms of cancer, yet EPA's current rules do not control some of the most widespread radioactive contaminants such as radon. According to EPA data, about 49 million people drink water containing significant levels of radioactive radon, and millions more drink water contaminated with radium, uranium, and other radioactive substances.<sup>10</sup>

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<sup>9</sup>See, Think Before You Drink, at 17-19, for further details.

<sup>10</sup>Ibid at 19-20.



C. Aging and Outdated Water Infrastructure and Failure to Protect Source Water Exacerbates the Problem.

The report NRDC is releasing today, Victorian Water Protection, finds that most water systems--including large systems--are not using "multiple barriers of protection" to protect public health. The best way to reduce the risks from contaminated drinking water is to provide more than one layer of protection: first, and most effective, is protecting water supplies from deterioration by preventing their pollution. Second, adequate pretreatment, filtration and disinfection is needed to reduce the risks from water that may contain pathogens or microbiological contamination. Third, if necessary, chemical contaminant removal technologies (such as membranes, ion exchange, aeration, or Granular Activated Carbon where appropriate), are needed to reduce the threats from degraded water supplies. Despite these needs, decades of technological revolution, most American water systems still are using outmoded treatment and water protection approaches. The report finds:

1. The vast majority of large water suppliers do little or nothing to prevent contamination of the watershed or groundwater that they rely upon for source water. Small systems are likely to have at least as bad a record.

2. Despite widespread chemical contamination of drinking water, most water utilities have failed to install modern water treatment technologies developed after World War I to remove chemical contaminants.

3. Scores of laggard large systems have not even installed basic technologies invented before the Civil War to remove pathogens and other microbiological contaminants from their degraded or threatened source waters--and the situation among smaller systems is likely to be worse.

4. Aged, crumbling distribution systems are neglected, and are often the cause of waterborne disease outbreaks. These aged pipes often harbor microbial growth, and are subject to catastrophic breakage. Broken or "cross connected" pipes that allow contaminated water to seep into the water system have often been linked by the Centers for Disease Control to waterborne disease outbreaks, yet the average water pipe will be over a century old before it is replaced by a large water system.

5. Effective drinking source water protection and water treatment are both technically and financially feasible. Safe drinking water act standards can be met and exceeded using techniques that, for the most part, were invented before 1930. These techniques have been proven effective, and are widely used in other industrialized countries.

6. The Safe Drinking Water Act and Clean Water Act must be made stronger to protect our Drinking Water Supplies. The Safe Drinking Water Act (SDWA)--which sets standards for the quality of water coming from your tap--and Clean Water Act (CWA)--which sets standards discharges and runoff into surface waters--are both currently up for reauthorization. This provides a golden opportunity to enact provisions designed to ensure public health.

Necessary legislative changes should include strengthened provisions for watershed and groundwater protection, tougher drinking water standards, increased funding to help systems pay for improvements, and beefed-up enforcement authority for EPA to ensure that standards are met.

### III. EFFORTS TO DATE TO RESOLVE SMALL SYSTEM PROBLEMS.

As is noted in the GAO report released today entitled Stronger Efforts Needed to Help Small Systems, while EPA has a very modest small system initiative aimed at establishing a few pilot projects to demonstrate small system low-cost technology, and to provide technical assistance, much more needs to be done.

State programs to resolve small system problems vary from fairly aggressive in states like Connecticut and Washington, to extremely weak in many states. Programs that have worked well tend to emphasize prevention of the creation of new, nonviable systems first, and then restructuring of existing nonviable systems through managerial restructuring, physical consolidation, state, regional, or large system takeover of small nonviable systems, and other creative means, to improve small system compliance. As is discussed below, we strongly agree with recommendations to build upon state programs to better address small system problems.

#### IV. ACTIONS NEEDED TO RESOLVE SMALL SYSTEM PROBLEMS.

NRDC generally agrees with the recommendations for resolving small system problems proposed in the Clinton Administration's drinking water recommendations and GAO's report Stronger Efforts Needed to Help Small Systems, but believes they need to be more fully fleshed out and expanded upon. In addition, NRDC is concerned about the lack of details in the Clinton plan, which could, if not properly developed, lead to differential standards of protection for small versus large systems.

Specifically, NRDC believes the following actions are needed to help resolve small system problems:

1. Small System Viability Programs Should be A Condition of Primacy. The SDWA should be revised to provide that each state with primacy under the SDWA is required to have a small system viability program. Within 18 months after the SDWA is amended, each state should have to develop and successfully implement an EPA-approved program to: (a) ensure the long-term viability of all new drinking water systems; and, (b) provide for the appropriate regionalization and/or consolidation of existing non-viable systems.

2. State Program Funding for Small Systems Initiative and Other Needs Should be Required to be Available. One of the fundamental flaws in small system programs for the past 20 years, as confirmed by GAO, is that these programs at EPA and at the state level are inadequately funded. The SDWA should be amended to provide that each state has 18 months to establish its own

financing mechanism, which could be based upon user fees, permit fees, chemical use taxes, or any other mechanism the state desires, so long as a dedicated permanent fund for drinking water protection activities is established, that meets the fiscal needs of the state to carry out the following functions:

- A. **State Program Funding for Drinking Water Program.** The funding scheme must provide adequate income to assure that the state primacy program will: (a) meet the primacy requirements of the SDWA; (b) pay for the state's program to prevent the creation of new, nonviable public water systems, and identify and eliminate or resolve problems with existing nonviable systems; and (c) be adequate to pay for sanitary surveys and other critical components of the state's drinking water program. Periodic sanitary surveys of all small and large PWSs in accordance with EPA guidelines should be a requirement to obtain and maintain primacy.
- B. **Funding to Assure that All Public Water Systems Offer "Life Line" Rates to Low Income Customers.** A state program also must be established to assure that to the extent feasible, residential customers with incomes below 150% of the federal poverty line will pay a lifeline rate of a maximum of 2% of their income on drinking water. The primacy state would be given flexibility in how to achieve this goal.

- C. **A Federal User Fee on Water Automatically Should be Put Into Place if No State Financing Program Has Been Approved by EPA.** A federal user fee on water to pay for the primacy program that is modeled on the Clean Air Act fee (estimated at about 8 to 15 cents per 1000 gallons) would be imposed to carry out the functions listed in A and B above if: (a) the Governor of the State requests the imposition of the fee (in which case the funds would be collected and provided to the primacy program in the form of a dedicated fund for the primacy program); or, (b) a primacy state does not get EPA approval within 18 months of a state program to provide adequate funds to fulfill the functions listed in A and B above; or, (c) EPA approval of the state's primacy or funding program is revoked. The federal fee would be collected by the PWS and sent to the federal government, which would then return all of those funds (minus federal administration costs of up to 15%) to the state for implementation of the primacy program. If the state does not have primacy, the federal user fee would be imposed immediately and would go to a dedicated federal fund for EPA to implement the program in that state. If the state has primacy but has not adopted all of the programs under points A and B above, the federal user fee would still be collected to the extent necessary for EPA to implement those parts of

the program not picked up by the state. Residential customers with incomes of less than 150% of the federal poverty level could file with their water system for exemption from the federal water user fee.

3. State Revolving Loan Fund to Help Resolve Small System and Other Problems. A revolving loan fund for projects that will help needy PWSs comply with the requirements of the SDWA should be created, as proposed by the Clinton Administration. Such a fund would not only help struggling communities to pay for their drinking water protection, but also would create badly-needed jobs in these communities.

The top priority of this fund should be paying for the consolidation of systems that are having difficulty or will have difficulty complying with the Act's requirements. Only if a system shows that it cannot come into compliance by consolidating or restructuring should a loan be available to upgrade the system. A set-aside for small systems should be included. Zero or reduced interest loans should be provided to very needy systems. Any system receiving federal funds should be required to establish a program to assure that drinking water is affordable for low income customers; loan repayment stretch-outs or reduced interest should be provided to pay for such programs where they cannot be paid for with a modest contribution from the customer base of 1.5% of the system's total billing.

4. Development or Identification of Best Available Technologies for Small Systems. In issuing standards, EPA should establish research, development, and demonstration programs to enable small systems to find technologies to enable them to comply with the standard. EPA should work with states to provide technical assistance to small systems so they can install those technologies.

Small systems should not, however, ever be authorized to exceed the MCLs, with a narrow exception where: (1) a source water protection program has been established and implemented; (2) the system cannot consolidate or restructure; (3) there is no alternative water source; (4) the system has provided full and understandable notice to its customers and there is an opportunity provided for discussion of the issue at the local level; and (5) the system is on schedule with installation of EPA-established BAT for that size of system.

5. Better Source Water Protection. As part of the primacy program, states should be required to develop a comprehensive plan to prevent the contamination of drinking water, establishing the roles and responsibilities of state and local governments for prevention, priorities, and prevention rules or other mechanisms, as well as data management and public participation procedures. The purpose of these provisions would be to get EPA to emphasize pollution prevention measures more, rather than end-of-the pipe



treatment as the basic remedy of choice. These programs should, at a minimum, include:

- o Local prevention plans for all public water systems, developed on a state-established priority basis, for protecting watersheds and groundwater used for drinking water. The plans could be developed on a basin-wide or area-wide basis, or on a system-by-system basis.
- o Expanded wellhead protection and watershed protection planning and management plans to assure drinking water protection.

In addition, EPA should be required to review and assure that all of its programs (e.g. CWA, RCRA, CERCLA, FIFRA, TSCA, and programs under other authorities) incorporate source control and pollution prevention mechanisms to assure protection of drinking water sources. Up to 5% of the SRF should be available to states for these preventative programs. Incentives to establish and implement these programs should be included, but no relaxation of MCLs should be authorized merely due to their adoption.

#### 6. Operator Certification and Better Technical Assistance.

There is a need to assure that small system operators are given the training and technical assistance they need to come into compliance. Therefore, the SDWA should provide that all operators of public water systems be certified and trained by the primacy program in accordance with EPA guidelines, including

small system operators. It is unfathomable why drivers must be licensed and show their driving proficiency in all states, but many public water system operators do not face a similar requirement before they can provide drinking water to the public. Small system technical assistance, training, and a certification program, tailored by system size, should be required as a part of all primacy programs. Up to two percent of the state's SRF should be available for such small system activities.

7. Authority to Require Restructuring or Consolidation.

EPA and states should have the authority to order consolidation, restructuring, and the ability to put abandoned or "basket case" systems into receivership.

V. CONCLUSION.

In conclusion, several steps are needed to assure better protection of public health from small systems with problems. Revisions to the SDWA and the CWA would help achieve this goal.

Mr. SYNAR. Ms. Stanley.

**STATEMENT OF KATHLEEN M. STANLEY, EXECUTIVE DIRECTOR, RURAL COMMUNITY ASSISTANCE PROGRAM, LEESBURG, VA**

Ms. STANLEY. Good afternoon, Mr. Chairman and members of the subcommittee. I am here on behalf of the National RCAP network and the small, rural communities we serve.

In 1993, RCAP provided onsite training and technical assistance in more than 500 small, rural communities on safe drinking water issues. Most of these communities have populations of less than 2,500 and are low-income or minority communities.

Today, most systems out of compliance with the Safe Drinking Water Act are small systems. Most simply cannot afford to meet the treatment, monitoring and testing requirements of the act. Many other small systems have reached their debt limit in order to comply and have no capacity to absorb additional debt to comply with future regulations. And there are still many people in rural America without any safe drinking water source.

We ask that the subcommittee consider the following important issues: One, the Safe Drinking Water Act must provide equal protection under the law for all. There cannot be different drinking water standards for individuals served by small systems or for those who can't afford to pay for safe drinking water. If the occurrence of a contaminant in the drinking water supply presents a sufficient health risk to merit regulation, the protection provided by that regulation should apply to all systems.

Two, EPA must give greater priority to the development of State comprehensive drinking water viability plans. These should be Statewide plans that take a holistic approach to safe drinking water supply and include pollution prevention, resource protection and wellhead protection.

Without these Statewide plans, many small communities and small systems will continue to see consolidation and restructuring as punitive measures, and efforts to better target and increase resources will continue to be scatter-shot.

Three, EPA should identify affordable best available treatment technologies for each standard it promulgates, and there should be separate recommended BAT for large, medium, small and very small systems. However, all BAT should meet the treatment requirements for maximum contaminant levels. Innovative and alternative technologies, simple technologies, point-of-use and point-of-entry technologies should not be excluded from consideration if they meet treatment requirements and offer affordable solutions.

Four, EPA should permit the compositing of testing wherever possible and should also aggressively encourage States to grant waivers for monitoring requirements where there is no evidence that a regulated contaminant is present.

Five, more training and technical assistance to small systems owners and operators and small community leaders and elected officials is needed if small systems are to comply with the Safe Drinking Water Act.

OMB reports that many small systems don't have adequately trained operators and lack information about safe drinking water

regulations, available treatment technologies and the real costs of providing safe drinking water. Some communities see efforts to consolidate and restructure their existing services as punitive measures—big brother measures—and do not have the assistance they require to effect these solutions.

States need not be and should not be the sole provider of these services. EPA should recognize the cost effectiveness of the successful technical assistance and training programs conducted by field-based organizations like RCAP.

RCAP strongly supports the authorization of the drinking water State revolving fund that was included in the appropriations for EPA. The key to success of this funding mechanism will be the proper targeting of funds.

The use of principal subsidies and other funding mechanisms that do not erode the corpus of the loan funds but offer negative interest loans or principal forgiveness for economically disadvantaged communities should be strongly encouraged.

Restrictions on the amount available to any one project and a small system set-aside would further ensure that the money goes where the greatest compliance problems exist—small systems.

Communities should be allowed to use SRF funds for planning purposes in order to assess viability, consolidate or restructure their systems.

Priority for SRF funds should be given to projects that include affordable, simple small system technologies.

Thank you for inviting me to testify before you. We look forward to working with you on these issues and look to you for leadership.

[The prepared statement of Ms. Stanley follows:]



**RURAL  
COMMUNITY  
ASSISTANCE  
PROGRAM**

**TESTIMONY OF KATHLEEN M. STANLEY,  
EXECUTIVE DIRECTOR, NATIONAL RURAL  
COMMUNITY ASSISTANCE PROGRAM (RCAP)  
BEFORE THE  
SUBCOMMITTEE ON ENVIRONMENT, ENERGY  
AND NATURAL RESOURCES OF THE  
COMMITTEE ON GOVERNMENT OPERATIONS  
UNITED STATES HOUSE OF REPRESENTATIVES**

March 14, 1994

Good afternoon, Mr. Chairman and Members of the Subcommittee. I am here on behalf of the national RCAP network and the small, rural communities we serve.

Many of the issues raised in GAO's report and in discussions being held regarding the reauthorization of the Safe Drinking Water Act (SDWA) are not exclusively "small" system issues. Capital funding for infrastructure improvements and repairs, increased resources to meet the cumulative costs of compliance with SDWA requirements, affordable rates for consumers, and better operations and maintenance of existing facilities are needs shared by all public and private water systems regardless of size. However, a one-size-fits-all approach to providing safe drinking water is not reasonable. Small systems present unique situations that often require creative, "small community" solutions due to their smaller customer and revenue base.

Today, most community water systems are small systems (87%) and small systems account for the majority of systems out of compliance (90%) with existing SDWA regulations. Most of these small systems simply cannot afford to meet the treatment, monitoring and testing requirements of the Act. Many other small systems struggling to stay in compliance have reached their debt limit in order to comply with existing regulations, and have no capacity to absorb additional debt to comply with future regulations.

As part of the debate regarding reauthorization of the Safe Drinking Water Act and in response to the GAO

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report released at this hearing today, we ask that the committee consider the following issues:

Equal Protection Under the SDWA ... Environmental Justice

The SDWA must provide equal protection under the law for *all*. There cannot be different drinking water standards for individuals served by small systems or for those that can not afford to pay for safe drinking water.

There has been much discussion of using "ability to pay" or "affordability" as criteria for setting standards for future contaminant regulations for small systems. If the occurrence of a contaminant in the drinking water supply presents a sufficient health risk to merit regulation, the protection provided by that regulation should apply to all size systems.

If as part of its standard setting process, EPA were to consider data from cost benefit analyses in addition to comprehensive health risk assessment and occurrence data, it should not be used to justify different levels of health protection.

Public Water Supply Services Viability

Comprehensive state drinking water viability plans can prevent potentially non-viable systems from forming and encourage the restructuring and/or consolidation of existing non-viable systems. Without state-wide plans, many small communities and small systems will continue to see consolidation and restructuring as punitive measures, and efforts to better target and increase resources (federal, state and other) will continue to be scatter-shot and ineffective.

EPA must give priority to the development of State Comprehensive Drinking Water Viability Plans. These should be state-wide plans that set long-term strategies for providing affordable, safe drinking water to all individuals in watershed areas, regions, communities, or smaller service areas within each state. They should *not* concentrate solely on small systems, but should present a holistic approach to safe drinking water supply and include pollution prevention, resource protection and wellhead protection.

The plan should give cost estimates and resource requirements for implementation, and propose where these resources might come from. Included should be projected revenues from existing PWSS programs, funds available from other federal and state sources (including the Drinking Water SRF, user fees or polluter-pays fees), and other available resources like technical assistance services provided by RCAP and other organizations that can be targeted to carry out activities in the plan.

EPA estimates that it would cost approximately \$100,000 per state to develop and implement these plans. One percent (1%) of the \$599,000,000 appropriated for a Drinking Water SRF (\$5,990,000) should be set aside and allocated to states for this purpose.

#### Small System Technologies

EPA should identify best available treatment technologies (BAT) for each standard it promulgates. There should be separate recommended BAT identified for large systems, medium systems, small and very small systems. All EPA-recommended BAT -- *regardless of system size* -- should meet the same treatment requirements for maximum contaminant levels and provide equal health protection.

To accomplish this, EPA should work with equipment manufacturers *and* universities, individual entrepreneurs and others at the field-level to develop and test simple, affordable treatment technologies for small systems. Point-of-use and point-of-entry treatment technologies should not be excluded from consideration as solutions if they meet treatment requirements and offer affordable solutions.

#### Effective Use of Monitoring & Testing Waivers

RCAP works with rural, low-income populations and is very sensitive to the need to protect the health of all Americans. At the same time, there is no need to force small systems in these communities to test for substances that are not there! In many small systems the highest budgeted cost is for testing. EPA should permit the compositing of testing wherever possible.

EPA should also strongly encourage states to grant waivers for monitoring requirements where there is no evidence that a regulated contaminant is present. In Massachusetts, EPA has approved waivers for testing under the Phase II Rule which will save a small surface water supply system \$8,000 in testing costs.

#### Small System Technical Assistance and Training Needs

More training and technical assistance to small system owners and operators, and small community leaders and elected officials is needed if small systems are to comply with the SDWA. OMB reports that many small systems are out of compliance due to untrained operators. Many small communities lack information about SDWA regulations, available treatment technologies, and the "real" costs of providing safe drinking water services. Others see efforts to consolidate and restructure their existing services as punitive measures and do not have the assistance they require to effect these solutions.

However, states need not be and should not be the sole provider of technical assistance. EPA has recommended that states use 1% of their PWSS allocation for technical assistance. Total funding for PWSS is \$58.9 million. One percent of this is \$589,000 or an average of less than \$12,000 per state (if allocated evenly). Obviously, this is not enough to meet the immediate training and technical assistance needs of the 14,796 small systems currently out of compliance, or the future needs of small systems.

EPA needs to recognize the importance of the successful technical assistance and training programs conducted by existing, field-based, national organizations like RCAP. The agency needs to support the continuation of these programs as cost-effective ways to provide on-site, community-specific training and technical assistance in small, rural communities.

#### Drinking Water State Revolving Funds

RCAP strongly supports the authorization of the Drinking Water State Revolving Fund (SRF) that was included in the appropriations for EPA. While the



funding levels proposed for the Drinking Water SRF are well below the real dollars needed, these funds can still be used to make much needed capital improvements in many communities.

The key to the success of this funding mechanism will be proper targeting of the funds. Efforts must be made to ensure small communities can successfully access these loan funds at affordable rates.

- The use of principal subsidies and other funding mechanisms that do not erode the corpus of the loan fund, but allow for negative-interest loans or principal forgiveness for economically disadvantaged communities should be strongly encouraged.
- Restrictions on the amount available to any one project and a small system set-aside would further ensure that the money goes where the greatest compliance problems exists -- small systems.
- Communities should be allowed to use SRF funds for planning in order to consolidate or restructure their systems.
- Priority for SRF funds should be given to projects that include alternative/innovative small system technologies.

Mr. SYNAR. We thank all of you on the panel.

Let's start with the basics. Do you agree we ought to eliminate the requirement that we regulate 25 contaminants every 3 years?

Ms. SMITH. Yes. Mr. Chairman, I probably shouldn't admit this, but I was around for the 1986 reauthorization and worked on it for several years prior to that. The notion at the time was EPA would come to Congress and say we don't have good data on this, we don't have research data, it will take 7 years, and the objective of the 25 every 3 years was to keep their R&D moving forward.

If we can have an alternative that keeps EPA's nose to the grindstone in terms of looking at what are real threats to drinking water, then we don't have to have an arbitrary number to set for regulation every 3 years.

Mr. SYNAR. Does everybody agree with that? We will let one person answer unless there is disagreement.

Mr. OLSON. I agree, with one caveat, which is that we believe the problem with the 1974 act was that there wasn't any requirement that, once there is evidence there was a problem with a contaminant, that EPA do something about it. So with the caveat that there be some requirement that the Agency move forward once it is apparent that there is a problem we would support a change as part of a package of amendments to the act.

Mr. SYNAR. Mr. Levy and Ms. Stanley, we have been hearing a lot about this cost-benefit-analysis approach. Are you worried that that approach might be just another reason for EPA not to regulate altogether?

Ms. STANLEY. There is always the risk that you just change the rules so people fall off the radar screen. That is a concern.

We are also concerned that it would mean less health protection if it is applied only to small systems. If there is a health risk, it is a health risk for everybody.

Mr. SYNAR. Mr. Levy, isn't it true that costs are easily quantifiable and benefits aren't?

Mr. LEVY. I will slide into your question.

The last 14 years I have worked with systems that have been faced with large costs, and it is a struggle, and many times they don't know where to come up with the money. If there is a drinking water problem, they want to know what the drinking water problem is, and they ask what is the problem. We say it is such and such or it isn't such and such.

They want to know how much it is going to cost, and we make a projection that is sometimes good and sometimes bad. Then they want to know what are they getting for their money? Is their water going to be better or is it not going to be better? If you can tell them that yes, their water will be better and safer the project will go through. If you can't provide that kind of basic evidence, that we don't know whether it will be better or not but you are simply complying, then you have trouble in the community.

Mr. SYNAR. Have you done a poll to find out what customers mean when they say they are willing to pay for something?

Mr. LEVY. I am a former economist a long time ago. There is something called a free rider effect in polling which is if you ask somebody what they want to do they will tell you, and maybe they are telling the truth and maybe they are not telling the truth.

Mr. SYNAR. Did you ever ask them what they are willing to pay to ensure clean water?

Mr. LEVY. In my experience, they will pay anything they need to be safe.

Ms. STANLEY. We have never really done a formal survey, but I agree that the question of cost comes down to what is the risk and what is the real cost. But if people know that it is important for them to have safe drinking water it is not a hard sell. It is hard to come up with ways to pay for it.

Mr. SYNAR. Mr. Levy, you said you had 200 small utilities testing for 70 contaminants, which came up to 14,000 tests, of which you found one violation. And that very persuasive statistic wasn't arguing for the systems not to require testing at least one time for all contaminants, is it?

Mr. LEVY. We support one test to see what is out there. We also support a waiver policy that if it is not around—

Mr. SYNAR. But at least one test to determine what is out there. Anybody disagree with that?

What about retesting on a baseline? Should that be done?

Ms. SMITH. Mr. Chairman, I think that one test—a baseline is not necessarily one test. For some contaminants, we may be talking about going in with one test or 1 year of tests. But in terms of establishing a baseline a snapshot may not work.

EPA's report to Congress, I believe, cites some USGS data that shows pesticide residues varying from 10 to 100 times in the period of time of a single growing season. So we think we need to establish a baseline with as narrow a testing as possible. We have to be careful about what constitutes a good baseline.

If you look at the cost of the monitoring, the two contaminants which are most expensive are dioxin and asbestos. Beyond that, the other tests that are very expensive are pesticides.

We would hope that at some point—although maybe not on drinking water reauthorization—but at some point Congress look at putting a levy on pesticide production because the pesticide producer may be able to absorb that fee a lot easier than a water system serving 25 people.

Mr. SYNAR. The pesticide manufacturer or user?

Ms. SMITH. The pesticide manufacturer. And to put that money toward helping with pesticide testing for small systems.

Mr. SYNAR. When you talk about setting a base period and setting parameters and also doing rechecks and also doing a variety of other things, you are saying that these rules should apply both to rural and urban systems. You shouldn't differentiate, correct?

Ms. SMITH. Correct.

Mr. SYNAR. Now, you heard my discussion with EPA. One could look at the fiscal year 1995 budget and wonder whether or not they have any creditability left with local water systems. Is that correct?

Mr. LEVY. From the rural water perspective, yes.

Ms. STANLEY. From our perspective, yes.

Ms. SMITH. We know that they struggled hard to get the money for the revolving fund, but we think that they should have increased the grant money to the States, and we would like to see more technical assistance grant money and research money as well.

Mr. OLSON. I would agree with what Velma said.

Mr. SYNAR. Should GAO and EPA prevail in their contention that certification and training should be mandatory for all systems?

Mr. LEVY. I think from the Federal perspective they should state that all water operators should be qualified, and then I believe it should be up to the States to determine what sort of qualifications.

Ms. STANLEY. We have never really done a formal survey. We don't have an uniform opinion across the country with that. But most people would not argue that they should be trained, if not certified.

Ms. SMITH. There should be certification. It shouldn't be easier to be a water system operator than it is a beautician.

Mr. SYNAR. How do we deal with the chronic nonviable system problem? Do you think we should let the nonviable systems go by the wayside? How do you deal with them?

Mr. OLSON. Our proposal is that you have to realize that there is a root cause, that you have too many tiny systems not able to take advantage of economies of scale. The way you solve the problem, you have to have States do case-by-case reviews of viability. You have to have an adequate Federal funding program that is matched by State money to consolidate and restructure and search for alternative water supplies. And you have to have an alternative BAT program that brings in available technologies to help the small guys comply if they cannot consolidate or restructure.

Mr. SYNAR. You are familiar with last year during the Energy and Commerce markup I tried to get a 15 percent set-aside for the SRF for rural systems so that they would have money. Do you believe that set-aside was a good idea?

Mr. OLSON. We would support a set-aside to look at consolidation of small systems with some kind of hierarchy so that you are not just propping up small systems that are nonviable. With that caveat, yes, we would support a set-aside for small systems.

Ms. SMITH. Our only potential problem with a set-aside is I wouldn't want that to become the cap for what small systems get. I want that to be the least.

Mr. SYNAR. I agree. Mr. Levy.

Mr. LEVY. I think it would be a mistake to simply focus on viability. And viability is the problem. I think we need to focus on public health standard setting and the ability to meet those standards, and that is where we are at and what we are after. We want safe drinking water for rural America. There will be times that viability is the issue and restructuring is necessary, but I think that should be on the plate with lots of other things such as training, such as technical assistance, such as groundwater protection, such as certification programs, et cetera.

But if we create a box and try to make everyone fit into this box it may create more problems than we are trying to solve.

Mr. SYNAR. You mentioned that restructuring was politically difficult, but you do agree we are going to have to restructure and consolidate—let me put another bullet in that gun for you.

Mr. LEVY. That means I will have to dodge 2 days.

Mr. SYNAR. You do think consolidation will be in order?

Mr. LEVY. I think there will be systems that need to consolidate, to restructure. I have done that.

As we speak today, I am putting together two of them. And it will work sometimes. There are other times that it won't.

Mr. SYNAR. I was fascinated with the viability program in Washington State, as described by Mr. Clark. It is clear that Washington—and he also mentioned Pennsylvania and Connecticut—are States that have taken the initiative to ensure that their systems can comply with the act, and have gone way beyond what we even anticipated. These States have done it voluntarily. If we could get the others to fall in line that way, that would be the way we should go.

What incentives do we need out there to avoid mandates? Because clearly that is what we would like to do. What is out there that helps us do that, Mr. Levy?

Mr. LEVY. I think there are a lot of incentives now. I think trying to comply with the Safe Drinking Water Act is an incentive to restructure. I think that with consent agreements, with methods, State agencies are using to force people to comply, they already have a lot of power to steer people in different directions.

I think that compliance with the Safe Drinking Water Act is forcing new concepts of viability. But I think there are a lot of options out there for a lot of systems.

We get concerned when there is a checklist of what is a viable system and what is not a viable system coming from Washington, DC. We think that precludes initiative and precludes a lot of different ways of solving.

Mr. OLSON. I had a couple of thoughts on that. One is that I would agree that compliance with the Safe Drinking Water Act has encouraged some consolidation. The problem is that there are proposals that would roll back the requirements of the Safe Drinking Water Act for small systems, and that would eliminate a lot of the incentives, we believe, for getting small systems to comply.

In addition, clearly, since we only have three States with really aggressive consolidation and regionalization programs, something is not happening, and we need to do something about the problem. We believe that taking EPA up on its proposal and saying that each State should have a viability program to prevent new nonviables and to address existing ones without having every single detail spelled out in Federal regulations is probably the right way to go. You would vary it from State to State, how it would be implemented.

Mr. SYNAR. Have you studied those three States and why they did it and the other 47 haven't?

Mr. OLSON. Yes. They have fairly different programs, but what is common to them is that they are all addressing—they are trying to address the problem of not creating new nonviable systems, which is clearly important, but you still have a tremendous number of existing systems and those programs deal with them differently.

In Connecticut, for example, they have a big brother program where they have large systems taking little guys under their wing and trying to help them.

In Pennsylvania—

Ms. SMITH. Pennsylvania was the leader in terms of putting State funds into helping systems financially. I think they have the oldest program in the country for providing loans and grants to

drinking water systems. Maryland, Connecticut, Washington are held up as the models and I think have done the most comprehensive work.

But there are other States as well. I was reviewing data and saw that in 1 year North Carolina had more consolidations than all other States combined. I can't recall the year. So I called the Public Utility Commission and what their legislature had adopted was a bonding requirement for systems, and even systems in existence had to fund that. That was a great incentive for consolidation.

Different States—Texas has been doing a good job of trying to improve their inventory. They didn't have good information on all the systems that were out there. California has requirements for looking at new—viability of new systems.

So there is a lot of good experimentation going on, and I don't think that a Federal program should say this level of system is nonviable or you must achieve this many consolidations. It should say that the State must have a program, that a State must arm itself with certain tools, but I don't think that EPA should put a checklist or do bean counting in terms of how many systems must be consolidated, how many times you must order takeovers and that sort of thing.

Mr. SYNAR. Mr. Mica.

Mr. MICA. You are all right on two points that we all agree on: one is that we provide funding, and the other is we provide technical assistance. Any disagreement with that? Did you all lobby the Congress, each of you?

Ms. SMITH. Yes.

Ms. STANLEY. No, I don't.

Mr. LEVY. No, I don't.

Mr. MICA. But you are concerned about the issue?

Mr. LEVY. Our organization does. I don't personally.

Mr. MICA. How about your organization, Ms. Stanley?

Ms. STANLEY. Yes.

Mr. SYNAR. I can save myself a lot of office time if your organization didn't lobby.

Mr. MICA. There is a proposal for a revolving funding mechanism. It passed out of my committee last year. What are you doing about getting that passed? As I understand, the moneys appropriated will expire in October. The clock is running.

Ms. SMITH. Probably in your basket of material you have seen letters from us because we have written to the Appropriations Committee and to Carol Browner asking her to make this a top priority.

Mr. MICA. These associations and these big Friends of the Earth groups—you can't move that little fund forward? I understand the Senate—is this correct that the Senate hasn't taken it up, the authorization?

Ms. SMITH. They are scheduled to do markup on Thursday.

Mr. MICA. So you are working.

Ms. SMITH. Also, since the 1986 amendments passed, the very first year after that we were in to see the Appropriations Committee to try to increase the State grant funding.

Mr. MICA. You need to get your lobbying act together if you are going to move that stuff forward because you have the ability to

move that stuff, especially powerful organizations like you all represent. If it expires it would be a travesty. And also whatever it ends up with as far as authorizing language should certainly address some of the things that have been brought out here today and you are concerned about.

Mr. OLSON. In order for that authorization to pass, a lot of Members have said that they would like to see the Safe Drinking Water Act reauthorized.

Mr. MICA. Hand in hand, but you ought to get it moving on both sides and get some consensus going.

The other item I was concerned about is technical assistance. Where have you all been? Have you written letters and provided technical assistance in the last year both to the authorizing committees and also to EPA? Do you have copies of those? I don't remember seeing them.

Ms. SMITH. In the last year—we have not specifically on technical assistance in the last year.

Mr. MICA. I need you to go back and do that. That is the way the system works.

How about your group, Mr. Olson?

Mr. OLSON. We have signed onto a lot of letters to the Appropriations Committee to increase funding for research.

Mr. MICA. You couldn't get the administration to come up with anything in its proposals or EPA to come forward with dollars for technical assistance, when that sort of goes to the core? Funding and technical assistance are two things I heard everybody agree on.

How about you, Mr. Levy?

Mr. LEVY. National Rural Water did testify before Appropriations.

Mr. MICA. There are letters on record on the technical assistance question. You need to work the process. That is how you get things done around here. Some of you have been around here long enough to know that. Seems like you could move them through exercising a little political muscle.

Ms. SMITH. We try, and over the past year we have put our top priority in trying to get the loan fund created and trying to get the money appropriated for the loan fund and, hopefully, to see an authorization that will allow the Agency to spend that money.

Mr. MICA. The other thing is we can regulate all we want in Washington but if you don't provide some assistance in the form of funds or technical assistance for some of these small systems you might just as well be whistling in the wind up here on a breezy day.

Consolidation sounds like a good idea, but there are some of these remote systems that you will never consolidate so you still have to have some flexibility and some reasonableness to the whole system, would you agree?

Ms. SMITH. Yes.

Mr. LEVY. I can't begin to tell you what a good job rural water people do because they can send people out and work with small water systems and bring them through the process. More than anything people don't understand the process, and if you have skilled people guiding them you can achieve incredible results.

Mr. MICA. Get them to write their members of these committees and get these moving. If you lose the 599 and we have another billion in store down the pike, you are not going to get anything done. Getting technical assistance——

The guy behind you came here with nothing proposed in his budget. It is a travesty. I blame Members of Congress and groups that aren't moving this. Thank you.

Mr. SYNAR. Let me thank this panel for outstanding testimony.

Let me make these brief remarks. I think it is clear that EPA is not putting its money where its mouth is. It has reduced grants to States to run the programs. As we have learned today, it has zeroed out the money for the National Rural Water Association's circuit rider program, and the Rural Community Assistance Program educational fund.

What we are learning today as we continue this debate on safe drinking water is that we need a reauthorization and we need a real commitment by EPA to safe drinking water and the concerns of small systems. The witnesses have told us why small systems are depending upon it. Most importantly, public health in rural America in particular, and small systems outside of our cities deserve it.

I hope this hearing has been helpful. We have learned a lot, and I think today's GAO report will assist those committees of jurisdiction as they proceed through the reauthorization process. I have no doubt that this is a subject we will return to.

Thank you all very much.

[Whereupon, at 3:55 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]



## A P P E N D I X

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### MATERIAL SUBMITTED FOR THE HEARING RECORD

Opening Statement  
J. Dennis Hastert  
Ranking Member  
Environment, Energy & Natural Resources  
March 14, 1994

Mr. Chairman:

Thank you for convening this hearing. It is especially timely as Congress considers the reauthorization of the Safe Drinking Water Act this year. I hope that Congress will proceed responsibly as well as expeditiously in addressing this legislation this year and not delay its consideration and passage until the 104th Congress. Indeed, assuring the public that the drinking water that they drink is safe is a priority of each and every member of Congress. The public has right to feel confident that their drinking water is free from biological and chemical contaminants and Congress has the obligation to ensure that our drinking water supply is preserved and safe.

As we are all aware, the 1986 Amendments to the Safe Drinking Water Act imposed increased responsibilities on States as well as additional compliance measures, including new treatment, monitoring, and reporting requirements. The costs associated with implementing these amendments is staggering. For example, EPA estimates that States face a current annual funding shortfall of \$162 million for implementing the Safe Drinking Water Act requirements. Compliance costs to meet new treatment, monitoring and reporting requirements is expected to cost water systems at least \$2.5 billion annually and a total of \$10 billion is needed for capital expenditures. Moreover, the costs associated with implementing these amendments are disproportionately borne by small water systems.

As Congress considers various recommendations to improve the Safe Drinking Water Act this year it is important that we not only address, but also correct the numerous problems confronting state governments and local communities in implementing the Act's requirements. In doing so, we must avoid imposing additional, burdensome, and costly regulations on state and local entities. Rather,

we must seek prudent and protective measures to ensure the safety of our nation's drinking water supply.

One such measure of particular significance is developing programs that protect our drinking water sources to prevent contamination from occurring. For example, in my district an aquifer is located near a site at which a group is seeking a permit to build an experimental balefill. If such a balefill is constructed at this location, the drinking water for thousands of citizens, their children as well as their children's children will be in jeopardy of becoming contaminated. Treatment costs for contamination could run to tens of millions of dollars, if possible at all. Indeed, the most reasonable way to assure my constituents that their drinking water will remain safe is to protect this source of water from even the possibility of contamination by simply locating the balefill at a different site.

It is my understanding that one of the Administration's recommendations for the Safe Drinking Water Act Reauthorization is the implementation of programs for both ground water and surface water to protect sources of drinking water from becoming contaminated in the first place. I applaud the emphasis on prevention programs and encourage the Administration to remain committed to this measure. Not only will such programs prevent pollution, but they will also reduce the long-term costs associated with current monitoring and treatment requirements.

In conclusion, I look forward to working with you Mr. Chairman in assuring that our nation's drinking water supply remains the safest in the world.



# SMALL DRINKING WATER SYSTEMS TECHNOLOGY

## SUMMARY OF EPA INITIATIVES, PROJECTS, AND SELECTED PUBLICATIONS

Compiled By:

Peter E. Shanaghan  
Small Systems Coordinator  
Office of Ground Water and Drinking Water  
United States Environmental Protection Agency  
Washington, DC 20460

MARCH, 1994

## CONTENTS

Small Systems Technology Initiative	1
Small Systems Technology Workbook	3
Videotapes: Drinking Water Track	3
Small Systems Technology Costs	4
Demonstration of Safe Drinking Water Technologies in Mexico	4
Manual on Management of Residuals from Drinking Water Treatment Facilities	5
Evaluation of Particulate Removal by Pressure Filtration	5
Comprehensive Performance Evaluations	5
Small Systems Drinking Water In-House Research	6
Small Systems Drinking Water Extramural Research	7
Filtration and Disinfection Technology Demonstrations (Region 2)	8
Solano Irrigation District Filtration Pilot Project (Region 9)	8
Selected Publications	9

SMALL SYSTEMS TECHNOLOGY INITIATIVE  
LEAD ORGANIZATION: OFFICE OF GROUND WATER AND DRINKING WATER  
CONTACT: PETER SHANAGHAN (202)260-5813  
PETER LASOVSKY (202)260-8499

A public-private partnership involving EPA, State drinking water programs, equipment suppliers, professional associations and organizations, and small water systems. The mission of the initiative is to identify and promote the use of drinking water treatment technologies for small systems which are cost-effective; for which small systems can easily provide or obtain dependable, competent O&M services; for which States will utilize a generally agreed upon design/performance review protocol; and through the application of which, small systems can achieve and maintain compliance with SDWA regulations. Major projects include:

**TECHNOLOGY DEMONSTRATIONS:** Five demonstration sites at which equipment suppliers are providing treatment equipment at little or no cost to the systems. The demonstration sites are:

AMSBRY, PA - Unfiltered surface water. Innovative package filtration system supplied by Kinetico. System installed and began operation in November, 1993. EPA project coordinator is Ghassan Khaled (215)597-8992.

PERRYSVILLE, IN - Ground water system with 12-15 mg/L nitrate. Ion exchange system being supplied by Alamo Municipal Equipment. Equipment has been installed. Start up delayed pending resolution of problems associated with integration of package unit into existing water system infrastructure. EPA project coordinator is Barb Wysock (513) 569-7906.

SUFFOLK, VA - Ground water system with  $> 5$  mg/L of fluoride. POU reverse osmosis units have been installed on one tap per connection. Three different equipment suppliers are participating: Kinetico Inc., Ecowater Systems, and Bruner Corporation. Equipment is installed and running. Project is being extended to allow additional data collection and demonstration of utility control of POU units O&M. EPA project coordinator is Ben Lykins (513) 569-7460.

FREESTONE, CA - Unfiltered spring. Culligan installed a Multi Tech filtration system. Project successfully completed. Key findings include: package plant consistently produced high quality water from a variable quality source; a contract operator was able to successfully monitor plant performance from his office 13 miles away by using a modern telemetry device, this minimized the amount of time he needed to actually spend at the plant; the package plant cost over 40% less than a

conventionally engineered and constructed facility. Final report being prepared. EPA project coordinator is Peter Shanaghan (202) 260-5813.

SPICEWOOD, TX - Ground water with about 9 pCi/L radium. Kinetico Inc. installed an ion exchange system. Project successfully completed. Final report was issued in February, 1993. Key findings include: the package plant was able to consistently produce water complying with current standards; the treatment unit was simple to operate and was readily accepted by the system owner/operator; the package plant was a cost effective treatment option for this small system. EPA project coordinator is Marc Parrotta (202) 260-3035.

**ALTERNATIVE STATE DESIGN REVIEW PROTOCOL:** The Association of State Drinking Water Administrators, in cooperation with EPA, is developing a suggested protocol for State review of small systems technology which will be more conducive to the application of potentially lower cost technology than the protocols currently in use. Based upon the Western States Workgroup's "Consensus Protocol for Evaluation and Acceptance of Alternative Surface Water Filtration Technologies in Small System Applications", a generic technology review protocol is being developed as well as specific applications of this generic protocol to filtration and other specific technologies.

**TECHNOLOGY INSTALLATIONS DATABASE:** The National Drinking Water Clearinghouse at West Virginia University is cooperating with EPA to develop a small system technology installation database. The database will be known as RESULTS (Registry of Equipment Suppliers of Treatment Technologies for Small Systems). RESULTS will provide general descriptions of package technologies and will also contain basic information about specific small systems in which they have been installed. The database should be available in mid-1994.

SMALL SYSTEMS TECHNOLOGY WORKBOOK  
LEAD ORGANIZATION: ENFORCEMENT AND PROGRAM IMPLEMENTATION DIVISION, OFFICE OF GROUND  
WATER AND DRINKING WATER  
CONTACT: BETH HALL (202) 260-5553

This workbook provides clear, simple advice and guidance on how to evaluate, select and obtain pre-engineered, package type treatment systems, which are generally appropriate and affordable for small drinking water systems. The workbook is designed to assist small system owners and operators, State regulatory officials, consulting engineers, and equipment suppliers. The first draft of this document was circulated for comment in mid-1992. Extensive comments were received. A comprehensively revised draft is currently being reviewed and final publication is anticipated in a couple of months.

VIDEOTAPES: IN PARTNERSHIP: GIVING RURAL AMERICA A VOICE, THE 1992 RCAC CONFERENCE -  
DRINKING WATER TRACK  
LEAD ORGANIZATIONS: REGION 9 AND THE RURAL COMMUNITY ASSISTANCE CORPORATION (RCAC)  
CONTACT: FRED EGGER (RCAC) (916) 447-2854.

This is a set of seven videotapes filmed at the 1992 RCAC conference, which provide information to correlate with and expand upon the information provided in the Small Systems Technology Workbook. The tapes are entitled "Drinking Water Compliance - Problems and Solutions"; "Assessing the Financial Feasibility of Drinking Water Alternatives"; "Procuring and Negotiating Professional Services"; "Preparing Proposals for State Approval"; "Financial Management and Budgeting as a Tool for Rate Setting"; "Installation, Operation and Certification of New Water Systems"; and "Building Constituencies for Environmental Protection". The tapes are of varying length and contain from one to three speakers. They are available as a set or can be purchased individually for the cost of copying. There are also a limited number of tapes that can be borrowed.

SMALL SYSTEMS TECHNOLOGY COSTS

LEAD ORGANIZATION: DRINKING WATER STANDARDS DIVISION, OFFICE OF GROUND WATER AND DRINKING WATER

CONTACT: BEN SMITH (202)260-3026

Document entitled "Very Small Systems Best Available Technology Cost Document". It summarizes costs for purchase, installation and operation of small systems treatment equipment, as well as treatment plant site development costs such as buildings, land, and access roads and other water system costs such as wellhead pump replacement and distribution system O&M. Copies available directly from Ben Smith.

ENVIRONMENTAL TECHNOLOGY INITIATIVE

DEMONSTRATION OF SAFE DRINKING WATER TECHNOLOGIES IN MEXICO

LEAD ORGANIZATIONS: DRINKING WATER STANDARDS DIVISION, OFFICE OF GROUND WATER AND DRINKING WATER AND DRINKING WATER RESEARCH DIVISION, RISK REDUCTION ENGINEERING LABORATORY

CONTACTS: STEVE CLARK (DWSD) 202-260-7575; BEN LYKINS (DWRD) 513-569-7460

This project will demonstrate cost-effective technologies for the control of toxic chemicals and pathogenic microorganisms in drinking water. The emphasis will be on low-cost, reliable, low maintenance technologies manufactured by US companies. This is part of the Agency's broader initiative to nurture the development and use of innovative environmental technologies as a vital investment in our nation's future environmental and economic well being.



**MANUAL ON MANAGEMENT OF RESIDUALS FROM DRINKING WATER TREATMENT FACILITIES**  
**LEAD ORGANIZATION: CENTER FOR ENVIRONMENTAL RESEARCH INFORMATION**  
**CONTACT: JIM SMITH (513) 569-7355**

This manual is a cooperative effort between EPA, the American Water Works Association, and the American Society of Civil Engineers. It will provide comprehensive information about the management of all types of drinking water treatment residuals. The document is currently under development.

**EVALUATION OF PARTICULATE REMOVAL BY PRESSURE FILTRATION**  
**LEAD ORGANIZATION: TECHNICAL SUPPORT DIVISION, OFFICE OF GROUND WATER AND DRINKING WATER**  
**CONTACT: ERIC BISSENETTE (513) 569-7933**

Very small systems using relatively clean surface water sources often seek approval to use package pressure filters without chemical pretreatment to comply with the filtration requirements of the Surface Water Treatment Rule. There are very little data on the effectiveness of this technology for removal of Giardia and Giardia-sized particles, and thus the appropriateness of this technology for compliance with the SWTR is in question. This project will examine the influence of various design and operational factors on the removal of Giardia and Giardia sized particles by pressure filtration without chemical pretreatment.

**COMPREHENSIVE PERFORMANCE EVALUATIONS/COMPOSITE CORRECTION PROGRAM**  
**LEAD ORGANIZATION: TECHNICAL SUPPORT DIVISION, OFFICE OF GROUND WATER AND DRINKING WATER**  
**CONTACT: JON BENDER (513) 569-7227**

The Comprehensive Performance Evaluation (CPE)/Composite Correction Program (CCP) approach identifies and corrects the unique combination of factors preventing a plant's compliance with the Surface Water Treatment Rule. The CPE is a procedure to systematically evaluate the design, operation, maintenance, and administration of a surface water treatment plant. Over 50 CPEs have been completed to date, nearly half of them at plants serving populations of under 3300 persons. Most small systems evaluated do not need major construction to comply with the SWTR. Institutionalization of this approach is being accomplished through transfer of capability to State drinking water programs. EPA has worked with seven States while developing the approach and currently have four pilot programs underway where CCP capabilities are being transferred to core teams of State personnel.

SMALL SYSTEMS DRINKING WATER IN-HOUSE RESEARCH  
LEAD ORGANIZATION: SYSTEMS AND FIELD EVALUATION BRANCH, DRINKING WATER RESEARCH DIVISION,  
RISK REDUCTION ENGINEERING LABORATORY  
CONTACT: BEN LYKINS (513)569-7460

This program conducts research on different package plants, POU/POE units, and a nearly full scale simulated distribution system at the EPA Test and Evaluation Facility in Cincinnati, Ohio. Treatment technology evaluations focus on disinfection and removal of byproduct precursor material. Distribution system research will focus on biofilms, disinfectant residual decay, and bacterial regrowth. An "electronic circuit rider" concept will be developed to gain some of the benefits of consolidation through the telemetering of significant operating parameters that can be monitored and integrated into a Supervisory Control And Data Acquisition (SCADA) system.

SMALL SYSTEMS DRINKING WATER EXTRAMURAL RESEARCH  
LEAD ORGANIZATION: SYSTEMS AND FIELD EVALUATION BRANCH, DRINKING WATER RESEARCH DIVISION,  
RISK REDUCTION ENGINEERING LABORATORY  
CONTACT: BEN LYKINS (513)569-7460

This research is designed to determine the capabilities of package plants in the field. The research involves the placement of a package plant, or whole house POE unit, in communities experiencing difficulty in meeting SDWA regulations. In general, the research will evaluate the following: package plant performance, distribution system effects on water quality, operation and maintenance costs, and community acceptance. The specific field sites are:

West Virginia Regional Planning Council - An ultrafiltration package plant is being evaluated in a small community (WAR, WV). The project also involves remote monitoring of the treatment system and sequestration of iron and manganese.

Region 9 Chemehuevi Indian Lands (CA) - An ultrafiltration package plant is being installed to serve 400 people utilizing impounded Colorado river water degraded by intense recreational use.

Lakeville, Maine - A garnet filter followed by ozone and UV POE unit was evaluated at a camp serving a transient population of 30 people daily.

Carrow, CT - The unit used in Lakeville, ME was outfitted with GAC to remove tetrachloroethylene from a well serving 4 households.

In addition to the above research, the SPFB and AWWA have entered into a cooperative agreement to collect cost and performance data on package plants already in operation. This project has identified several hundred package plants in operation throughout the United States and has visited a geographic and technological cross-section of about 50 systems. Draft report currently under review.

**FILTRATION & DISINFECTION TECHNOLOGY DEMONSTRATIONS**  
**LEAD ORGANIZATION: REGION 2 DRINKING/GROUNDWATER PROTECTION BRANCH**  
**CONTACT: RICK NARANG (212) 264-7675**

Frederickstad Day Care Center in St. Croix, Virgin Islands - A demonstration "package plant" consisting of ultrafiltration and ultraviolet disinfection is being installed to treat water for this day care center which serves 50 children per day. The ultraviolet germicidal lamps are being donated by Atlantic Ultraviolet Corporation. The Bruine filters are being donated by Polycaribe, a manufacturers representative. Equipment installation and start-up is planned for mid-1994. Monitoring will be conducted for turbidity, total coliform, fecal coliform, heterotrophic plate count, giardia, cryptosporidium, and viruses.

Tiskilwa, New York - 28 homes are utilizing POE devices consisting of ultrafiltration and ultraviolet disinfection to treat surface water. The homeowners have formed a nonprofit association which is maintaining the units and conducting necessary sampling and reporting. The demonstration period has been successfully completed.

**SOLANO IRRIGATION DISTRICT (CA)**  
**FILTRATION PILOT PROJECT**  
**LEAD ORGANIZATION: REGION 9 DRINKING WATER AND GROUNDWATER PROTECTION BRANCH**  
**CONTACT: BILL ROBERSON (415) 744-1857**

This project is evaluating Point-of-Entry filtration options for a water supply with an unusual fine clay like turbidity. Promising results have been obtained in pilot testing nanofiltration units. An evaluation of the potential cost effectiveness of this treatment option is being conducted.

## **SELECTED EPA PUBLICATIONS**

**INFORMATION ON ORDERING THESE PUBLICATIONS MAY BE  
OBTAINED BY CALLING EPA'S SAFE DRINKING WATER HOTLINE  
AT 1-800-426-4791.**

## **INFORMATION RESOURCE DIRECTORY**

Andrew W. Breidenbach Environmental Research Center Small Systems Resource Directory.  
July 1992. EPA/600/R-92/098.

Resource Guide for Small Drinking Water Systems.  
September 1989. EPA 570/9-89-015.

## **DRINKING WATER TREATMENT TECHNOLOGY OVERVIEWS**

Environmental Pollution Control Alternatives: Drinking Water Treatment for Small Communities.  
April 1990. EPA/625/5-90/025.

Technologies for Upgrading Existing or Designing New Drinking Water Treatment Facilities.  
March 1990. EPA/625/4-89-023.

Summary Report: Small Community Water and Wastewater Treatment.  
September 1992. EPA/625/R-92/010.

Manual of Small Public Water Supply Systems.  
May 1991. EPA 570/9-91-003.

Manual of Individual and Non-Public Water Supply Systems.  
May 1991. EPA 570/9-91-004.

Case Studies Assessing Low-Cost, In-Place Technologies at Small Water Systems.  
July 1992. Available from Peter Shanaghan (202) 260-5813.

Proceedings: Small System Water Treatment Symposium, Cincinnati, Ohio.  
November, 1978. EPA 570/9-79-021.

## **STATE TECHNOLOGY DESIGN REVIEW**

Report on State Engineering Practices for Small Water Systems.  
July 1991. Available from Peter Shanaghan (202) 260-5813.

Consensus Protocol for Evaluation and Acceptance of Alternative Surface Water Filtration Technologies in Small System Applications. April 1992. Available from Peter Shanaghan (202) 260-5813.

## **FILTRATION/DISINFECTION**

Technologies and Costs for Control of Disinfection By-Products: Executive Summary.  
EPA 811/5-92-002.

Turbidity Removal for Small Public Water Systems.  
June 1983. EPA 570/9-83-011

Microorganism Removal for Small Water Systems.  
June 1983. EPA 570/9-83-012.

Summary Report: Optimizing Water Treatment Plant Performance with the Composite Correction Program.  
March 1990. EPA/625/8-90/017.

Handbook: Optimizing Water Treatment Plant Performance Using the Composite Correction Program.  
February 1991. EPA/625/6-91/027.

Project Summary: Feasibility Study of Alternative Technology for Small Community Water Supply.  
March 1985. EPA-600/S2-84-191.

Project Summary: Evaluation of Erosion Feed Chlorinators.  
December 1985. EPA/600/S2-85/126.

Project Summary: Field Evaluation of the Land-O-Matic Dry Pellet Chlorination System.  
January 1988. EPA/600/S2-87/085.

## **RADIONUCLIDE TREATMENT**

Evaluation of Demonstration Technologies: Quail Creek Water Supply System.  
February 1993. EPA 812-R-93-001.

Project Summary: Radium Removal for a Small Community Water Supply System.  
September 1988. EPA/600/S2-88/039.

Project Summary: Manganese Dioxide-Coated Filters for Removing Radium from Drinking Water.  
January 1989. EPA/600/S2-88/057.

Project Summary: A Study of Possible Economical Ways of Removing Radium from Drinking Water. April 1988. EPA/600/S2-88/009.

Environmental Research Brief: Low-Cost/Low-Technology Aeration Techniques for Removing Radon from Drinking Water. September 1987. EPA/600/M-87/031.

Project Summary: Radon Removal Techniques for Small Community Public Water Supplies. November 1990. EPA/600/S2-90/036.

Project Summary: Uranium Removal from Drinking Water Using a Small Full-Scale System. August 1989. EPA/600/S2-89/012.

Project Summary: Removal of Uranium from Drinking Water by Ion Exchange and Chemical Clarification. December 1987. EPA/600/S2-87/076.

Radionuclide Removal for Small Public Water Systems. June 1983. EPA 570/0-83-010.

## CORROSION CONTROL

Seminar Publication: Control of Lead and Copper in Drinking Water. May 1993. EPA/625/R-93/001.

Project Summary: Limestone Bed Contactors for Control of Corrosion at Small Water Utilities. February 1987. EPA/600/S2-86/099.

Corrosion in Potable Water Systems. September 1983. EPA/570/9-83-013.

Lead in School Drinking Water. September 1989. EPA 570/9-89-001.



## **POINT-OF-USE/POINT-OF-ENTRY TREATMENT**

Project Summary: Radon Removal Using Point-of-Entry Water Treatment Techniques. December 1990. EPA/600/S2-90/047.

Project Summary: Radon Removal by POE GAC Systems: Design, Performance, and Cost. January 1991. EPA/600/S2-90/049.

Project Summary: Point-of-Use Treatment of Drinking Water in San Ysidro, New Mexico. March 1990. EPA/600/S2-89/050.

## **ARSENIC REMOVAL**

Project Summary: Arsenic (III) and Arsenic (V) Removal from Drinking Water in San Ysidro, New Mexico. June 1991. EPA/600/S2-91/011.

## **NITRATE REMOVAL**

Project Summary: Nitrate Removal from Drinking Water in Glendale, Arizona. March 1987. EPA/600/S2-86/107.

Project Summary: Nitrate Removal from Contaminated Water Supplies: Volume I. Design and Initial Performance of a Nitrate Removal Plant. April 1987. EPA /600/S2-86/115.

Project Summary: Nitrate Removal from Contaminated Water Supplies: Volume II. Final Report. August 1987. EPA/600/S2-87/034.

Nitrate Removal for Small Public Water Systems. June 1983. EPA 570/9-83-009.

## **RESEARCH SUMMARY**

Drinking Water Treatment for Small Communities: A Focus on EPA's Research. Forthcoming, 1994. EPA/640/K-93/003.

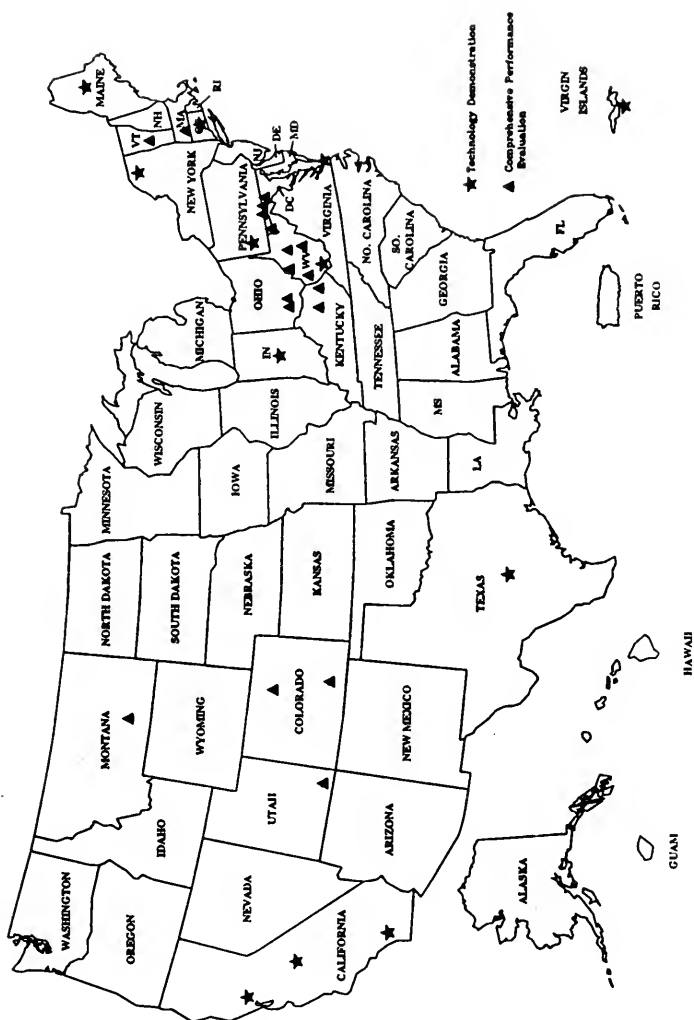
## **DISTRIBUTION SYSTEMS**

Seminar Publication: Control of Biofilm Growth in Drinking Water Distribution Systems. June 1992. EPA/625/R-92/001.

## **SAMPLING GUIDE**

Pocket Sampling Guide for Operators of Small Water Systems. April 1992. EPA/814-B-92-001.

# LOCATIONS OF EPA SMALL SYSTEMS TECHNOLOGY DEMONSTRATION AND EVALUATION PROJECTS



# National Consumer Law Center Inc.

1875 Connecticut Ave., NW  
Suite 510  
Washington, DC 20009  
(202) 986-6060  
(202) 986-6648 (Fax)

April 4, 1994

Boston Office:

Eleven Beacon St.  
Boston, MA 02108  
(617) 523-8010  
(617) 523-7398 (Fax)



The Honorable Mike Synar  
House Government Operations Committee  
Subcommittee on Environment, Energy & Natural Resources  
B-371B Rayburn House Office Building  
Washington, D.C. 20515

Dear Mr. Chairman:

On behalf of our low income clients, the National Consumer Law Center would like to take this opportunity to add to the information you received on March 14 regarding the impact that the Safe Drinking Water Act's provisions has on low income households. We submit information today addressing the needs of those Americans for whom the loss of water service, due to their inability to pay escalating charges, is a persistent and painful threat. This issue was not really addressed in the testimony presented at this hearing, and is one of great importance to the country's low-income population.

The National Consumer Law Center is a national support center for legal services attorneys and pro bono attorneys representing low income consumers around the country. These attorneys regularly request our assistance with technical, legal and administrative support on cases covering issues including utility rates, terminations of utility service, assistance in obtaining energy benefits, as well as a broad range of consumer credit issues. We represent households with the very lowest incomes in the nation, only those who live at or below 125% of the Federal Poverty Level.

For many Americans, the right to safe drinking water is threatened not only by water-borne contaminants, but also by the rising cost of water and sewer service. Low-income consumers who cannot afford to pay their water or sewer bills will generally have their water service terminated altogether. (In analyzing the cost to consumers of safe drinking water, it is important to include in the calculus the cost of both water and sewer services. In most communities the failure to pay for sewer service will result in the termination of water service. Sewer rates are also on the rise and this poses a serious threat to the ability of low-income Americans to continue to receive the drinking water they need.)

Unfortunately, the measures taken in the Safe Drinking Water Act to ensure public safety from water borne contaminants significantly contribute to low-income Americans being priced out of the market for water altogether. Loss of water service is itself a grave threat to public health. It would be a cruel irony indeed if the quest for cleaner drinking water led to the *complete loss* of water service for

The Honorable Mike Synar  
 April 1, 1994  
 page 2

service for thousands of impoverished households. Already many low-income people struggle to pay their utility bills. **There can be little doubt that the rising costs for water service will continue to impose significant hardships on poor households. We ask that the committee recognize the burdens on impoverished families which are exacerbated by the requirements of the Safe Drinking Water Act, and seek ways to reduce this burden.**

As discussed later in this letter, NCLC believes that adding language to the SDWA which addresses the burden of low-income consumers is critical.

#### Background

**Choices for the Poor.** Increasingly high water rates throughout the nation will impose significant burdens on low income households. Already, the poor are being constantly forced into making impossible choices - eat or be clothed, pay the rent or pay for medicine. Now, added to these historical quandaries will be one more - pay for water or for heat.

**Any increases in water rates can create difficulties for poor households.** Because low-income families live so close to the line, a price increase in a basic necessity can wreak havoc on a household budget - even if the final costs for that necessity are not as great as they are in neighboring communities. It is the dramatic *increase* itself that might cause the most hardship, as the increase will require choices: which other expense will be sacrificed to pay for this increase in the cost of a commodity necessary to life.

The rural area concerns raised at last week's hearing are reflective of the drinking water concerns of low-income people throughout the nation - how can we afford to comply with the SDWA if there is no funding to do so? We do not have specific figures of the recent increases of water rates in *rural* areas, other than anecdotal information, but the dramatic increases experienced by ratepayers in *urban* areas are indicative of the problems faced by rural residents.

Recent increases in water and sewer rates provide an outlook on future rate hikes. The bi-annual survey of water and sewer rates in 142 cities across the nation conducted by Ernst & Young reveals that between 1988 and 1992, in the nation's largest cities, the *average* residential bill of \$9.95 for water service increased to \$12.36, an increase of 24.2%. (A table detailing the increases in these cities reported from 1988 to 1990 to 1992, is attached as Table I.) In some cities, however, the *actual* increase during this four year period was far greater. For example:

- Sacramento, California rates for water service increased from \$4.07 in 1988 to \$10.37 in 1992, an increase of 154.8%.
- Davenport, Iowa rates increased by 66.3% from \$12.57 in 1988 to \$20.90 in 1992.
- Boston, Massachusetts water rates went from \$8.82 in 1988 to \$16.74 in 1992, an increase of 89.8%.

The Honorable Mike Synar  
 April 1, 1994  
 page 3

- Canton, Ohio rates started out at a low of \$3.03 in 1988 and increased by 200.3% to \$9.10 in 1992.
- In Scranton, Pennsylvania the water rates went from \$16.17 in 1988 to \$32.17 in 1992, an increase of 65.6%.

**Rural Rates.** These increases are also affecting rural dwellers, as was almost unanimously expressed in last week's hearing. **Indeed, the testimony given by GAO described water costs to rural households as increasing at an even greater rate than urban households<sup>1</sup>.** As the attached data shows, urban area high water costs have been, and will continue to be, devastating to low-income households; rate increases affecting rural low-income households will lead to even greater financial distress. As the GAO testimony indicated, "the EPA estimates that household costs for larger water systems will increase by about \$210/yr, as compared with up to \$1,500 per household for smaller systems serving populations of 100 or fewer."

Testimony given by David Clark from WA State Dept. of Health, also addressed this problem of increasing rates and the impact on customers of small water systems. Citing the Public Water Systems Needs Assessment Report, Mr. Clark indicates that the new operational requirements for small systems will drive monthly household costs for customers on the very smallest systems into the \$50 to \$70 range.

**The Impact on Low Income Households.** When comparing this data to the Ernst & Young urban impact survey, a terrible increase to the rural low-income burden is clearly evident. Already, the burden on urban low-income dwellers has been recognized. Although cost increases are expected to be greater over the next ten years, current high rates are *already* affecting low income households in many communities around the U.S. In many cities, low income elderly or disabled households relying on SSI<sup>1</sup> are spending over 2% of their monthly income on water bills alone. Yet, as the true cost of obtaining water service almost always includes the price of the sewer service, the *combined costs* must be evaluated to determine the extent of the burden on low income households to purchase drinking water. **Many low income elderly or disabled households relying on SSI are already spending over 5% of their monthly income to obtain water service to their homes.**

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<sup>1</sup> SSI benefits (Supplement Security Income) are provided monthly, in accordance with uniform, nationwide eligibility requirements, to needy aged, blind and disabled persons. The program is a means tested, federally administered income assistance program authorized by title XVI of the Social Security Act.

The Honorable Mike Synar  
 April 1, 1994  
 page 4

Impact of Water Costs on Low Income Households  
 Elderly and Disabled  
 SSI Households of 1

Selected cities:

City	SSI For Family of 1	Monthly 1992 Water	Percent of Income Spent on Water	Monthly 1992 Sewer	Monthly Combined	Percent of Income Spent on Wat & Sew
Philadelphia, Pa.	\$439	\$6.81	1.55%	\$21.15	\$27.96	6.37%
Houston, Tex.	\$407	\$12.60	3.10%	\$11.12	\$23.72	5.83%
Nashville, Tenn.	\$407	\$11.65	2.86%	\$11.65	\$23.30	5.72%
Trenton, N.J.	\$438	\$10.65	2.43%	\$12.74	\$23.39	5.34%
Tacoma, Wash.	\$435	\$9.30	2.14%	\$13.41	\$22.71	5.23%
New Orleans, La.	\$407	\$11.34	2.79%	\$9.88	\$21.22	5.21%
Davenport, Iowa	\$407	\$12.70	3.12%	\$8.32	\$21.02	5.16%

(based on monthly average water usage of 4,000 gallons)

Low income families with children, depending on Aid to Families with Dependent Children (AFDC)<sup>2</sup> are even harder hit, some are spending over a fifth of their income to obtain water service, many are spending in excess of 8%.

Impact of Water Costs on Low Income Households  
 Families with Children  
 AFDC Households of 4

Selected cities:

City	AFDC For Family of 4	Monthly 1992 Water	Percent of Income Spent on Water	Monthly 1992 Sewer	Monthly Combined	Percent of Income Spent on Wat & Sew
Nashville, Tn.	\$238	\$24.30	10.21%	\$24.30	\$48.60	20.42%
Jackson, Miss.	\$144	\$15.40	10.69%	\$12.90	\$28.30	19.65%
Phoenix, Ariz.	\$155	\$8.72	5.63%	\$7.17	\$15.89	10.25%
Scranton, Penn.	\$514	\$32.17	6.26%	\$13.09	\$45.26	8.81%
Joliet, Ill.	\$414	\$24.12	5.83%	\$11.75	\$35.87	8.66%
Akron, Ohio	\$413	\$16.72	4.05%	\$17.89	\$34.61	8.38%
St. Petersburg, Fla.	\$346	\$12.42	3.59%	\$16.23	\$28.65	8.28%

(based on monthly average water usage of 7,000 gallons).

<sup>2</sup> AFDC (Aid to Families with Dependent Children) is a grant program which provides cash welfare payments for needy children who have been deprived of parental support or care because their father or mother is absent home continuously, is incapacitated, is deceased, or is unemployed. States define "need," set their own benefit levels, establish income and resource limits and administer the program.

The Honorable Mike Synar  
 April 1, 1994  
 page 5

**Heavier Burdens Imposed on Impoverished Households in Rural Areas.** Using the data from the Needs Assessment Report, and assuming the increase to \$50/month, on average a rural AFDC family will pay 10% of their income (based on 7000 gallons) on water & sewer. As averages mask the extremes, some rural households will be faced with much higher water bills. These burdens are unacceptable to both urban and rural low-income consumers who can barely get by on the limited income they have without additional expenses.

### Proposed Solutions

#### **Proposed Method of Addressing Cost Burdens of the SDWA on Low-Income Households.**

Assuming that the goal of the Safe Drinking Water Act is to make safe drinking water available to all Americans, it is important for the Congress to address the plight of those Americans on the margins, for whom safe drinking water threatens to become a luxury they cannot afford. The solution we propose on behalf of our low income clients to address the water affordability crisis is to **require that any state which receives federal dollars for a state revolving loan fund for Safe Drinking Water Compliance must establish safeguards to assure that water is available on an affordable basis to low income households in the communities served by public water systems receiving State Revolving Loan funds.** The following language should be added in the section authorizing the State Revolving Loan Fund:

"A state which receives grants under this section shall ensure that water is available on an affordable basis to households living at or below 150% of the Federal Poverty Level<sup>3</sup> in the service community of a public water system that receives financial assistance under this section. For purposes of this statute, "affordable" as applied to water rates, means as close to 2% of a household's gross income as is feasible for the system."

1) **Extent of Mandate.** The mandate imposed by this amendment is only that the state *address* the issue of affordability. The 2% of income is simply a *goal* to assist the state and the system in determining what an affordable water rate is; it is not a requirement that the rates be set at any particular level.

2) **Paying for Affordable Rates.** There are a number of ways in which a state can assist a public water system make water bills affordable to low income households in the community. Providing tax dollars as a direct benefit, to reduce the water bills of the eligible households would be one way; however a number of alternatives exist. For example:

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<sup>3</sup> The poverty level is defined by the Department of Census to be those households who live at or below Federal Poverty Guidelines. In 1992 the poverty level for a family of four was \$13,950. 57 Fed. Reg. 5455 (Feb. 14, 1992). The Federal Poverty Income Guidelines are set by the Department of Health and Human Services.



The Honorable Mike Synar  
 April 1, 1994  
 page 6

- The standard method for utility assistance programs to be funded (as they are generally in the energy area) is by charging non-poor ratepayers a small, extra assessment on their bill and using the funds generated to support lower rates for low income households. Some cities (such as Seattle and Los Angeles) which currently have water assistance programs for poor and elderly families charge an extra 5-6% to other ratepayers. However, even an assessment of 1½% per month can generate significant sums in support of a low income affordability program. Yet the effect on the other ratepayers is not significant: 1½% on a bill of \$15 is only 23 cents.
- Changing the interest rate and/or payment terms of the SRF loan could generate thousands of dollars to support affordable rates. A \$1 million loan at 6% repayable over 15 years would ordinarily require payments of \$102,962 a year. However, the same loan for \$1 million with a 0% interest rate repayable over 20 years would only require annual payments of \$50,000. The difference between these payments - \$52,962 a year - could be considered as a state contribution to making rates affordable to the eligible low income households in the community, without reducing the revolving loan funds itself.

3) **Other Methods To Make Rates Affordable.** While actually lowering the rates charged for water service is the best way to ensure that rates are affordable for poor households, other methods exist to help low income households maintain service:

- For many low income households, their difficulty in paying water bills is exacerbated by the large amount of water for which they are billed, but which they do not actually use - caused by leaky pipes and fixtures. Targeting various housing assistance programs to remedying these problems will make a significant difference in the long run to reducing the water bills charged to these low income households. Potential sources of funds include Community Development Block Grants (CDBG); HOME funds; as well as other state and federal housing assistance programs for low income households.
- Once leaky pipes and fixtures are repaired, many low income households might well be able to meet their ongoing water expenses, so long as they are not burdened with trying to pay old arrearages. Arranging an arrearage forgiveness plan (along the lines of Philadelphia's WRAP program) can help low income households maintain current water bills.
- In some instances, simply making bills due on a monthly basis, rather than a bi-monthly or quarterly basis may make a significant difference to households living on fixed, small monthly incomes.
- Employing other means to assist low income households avoid the danger and expense of termination of water service also makes water more *affordable*, such as those listed below. The energy crisis in the 1970s convinced Congress to require that energy providers consider some notice and right to challenge threatened terminations. See Public Utilities Regulatory Policies Act (PURPA) 16 U.S.C. §§ 2601 *et seq.* (1980). At a minimum, the crisis on the horizon for water and sewer rates should convince lawmakers to require similar protections before the necessities of water and sewer services are terminated. Minimum standards that Congress should require of all providers of drinking water include those listed here:

The Honorable Mike Synar

April 1, 1994

page 7

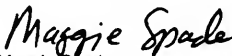
- The opportunity to pay back bills over a period of six months to a year to prevent termination.
- A prohibition against termination of water service to households which include children, elderly or disabled persons.
- A guarantee of continuous service for a specified period in emergency situations, or while alternative payment arrangements are being made.

Mr. Chairman, we thank you for taking the time to review our comments, and we look forward to working with you to amend the Safe Drinking Water Act in ways that will further its goal of providing affordable safe drinking water to all Americans.

Sincerely,



Margot Saunders  
Managing Attorney



Maggie Spade  
Research Assistant (Boston Office)

cc: Dennis Hastert

Table I  
Water Increases 1988 - 1992  
Based on monthly bills

State	City	88 Water	90 Water	88 - 90 % age Incr	92 Water	90 - 92 % age Inc	88 - 92 Increase
Alabama	Birmingham	\$10.34	\$11.96	15.7%	\$12.66	5.9%	22.4%
	Mobile	\$7.73	\$9.66	25.0%	\$9.74	0.8%	26.0%
Arizona	Phoenix	\$7.42	\$8.90	19.9%	\$8.72	-2.0%	17.5%
	Tucson	\$13.35	\$15.00	12.4%	\$15.75	5.0%	18.0%
Arkansas	Little Rock	\$9.25	\$9.52	2.9%	\$9.52	0.0%	2.9%
California	Anaheim	\$11.93	\$13.68	14.7%	\$13.89	1.5%	16.4%
	Bakersfield	\$8.46	\$8.90	5.2%	\$9.39	5.5%	11.0%
	Fresno	\$3.95	\$5.63	42.5%	\$6.88	22.2%	74.2%
	Los Angeles	\$11.23	\$12.65	12.6%	\$14.85	17.4%	32.2%
	Oakland	\$10.84	\$12.20	12.5%	\$16.05	31.6%	46.1%
	Sacramento	\$4.07	\$5.17	27.0%	\$10.37	100.6%	154.8%
	San Diego	\$11.81	\$12.16	3.0%	\$13.88	14.1%	17.5%
	San Francisco	\$6.60	\$6.60	0.0%	\$11.50	74.2%	74.2%
	San Jose City	\$12.60	\$12.84	1.9%	\$16.76	30.5%	33.0%
	San Jose County		\$13.62	N/A	\$17.52	28.6%	N/A
	Stockton	\$7.08	\$8.95	26.4%	\$10.45	16.8%	47.6%
	Ventura	\$6.48	\$8.45	30.4%	\$13.35	58.0%	106.0%
Colorado	Colo Spr	\$16.59	\$16.59	0.0%	\$16.59	0.0%	0.0%
	Denver	\$8.36	\$8.36	0.0%	\$7.12	-14.8%	-14.8%
Connecticut	Bridgeport		\$22.45	N/A	\$25.58	13.9%	N/A
	Hartford	\$13.55	\$15.46	14.1%	\$12.16	-21.3%	-10.3%
	New Haven	\$20.25	\$21.42	5.8%	\$25.24	17.8%	24.6%
D.C.	Washington	\$10.04	\$10.04	0.0%	\$10.04	0.0%	0.0%
Florida	Ft. Lauderdale	\$9.79	\$10.88	11.1%	\$11.40	4.8%	16.4%
	Jacksonville	\$9.40	\$8.20	-12.8%	\$8.20	0.0%	-12.8%
	Lakeland	\$7.35	\$7.35	0.0%	\$7.35	0.0%	0.0%
	Miami	\$6.58	\$7.13	8.4%	\$9.57	34.2%	45.4%
	Orlando	\$5.85	\$6.05	3.4%	\$6.14	1.5%	5.0%
	St Peter	\$9.75	\$11.71	20.1%	\$12.42	6.1%	27.4%
	Tampa	\$6.10	\$7.70	26.2%	\$7.70	0.0%	26.2%
	Palm Beach County	\$9.10	\$9.20	1.1%	\$11.70	27.2%	28.6%
Georgia	Atlanta	\$15.25	\$15.25	0.0%	\$15.25	0.0%	0.0%
	Augusta	\$5.60	\$7.18	28.2%	\$6.72	-6.4%	20.0%
Hawaii	Honolulu	\$7.55	\$9.95	31.8%	\$11.23	12.9%	48.7%
Illinois	Chicago	\$5.91	\$6.69	13.2%	\$8.81	31.7%	49.1%
	Joliet	\$14.31	\$14.31	0.0%	\$24.12	68.6%	68.6%
	Peoria	\$21.30	\$21.30	0.0%		-100.0%	-100.0%
Indiana	Gary	\$16.47	\$17.05	3.5%	\$15.33	-10.1%	-6.9%
	Indianapolis	\$12.85	\$12.85	0.0%	\$13.80	7.4%	7.4%
	Ft. Wayne	\$10.67	\$10.67	0.0%	\$12.84	20.3%	20.3%
Iowa	Davenport	\$12.57	\$12.57	0.0%	\$20.90	66.3%	66.3%
	Des Moines	\$9.43	\$12.64	34.0%	\$13.45	6.4%	42.6%
Kansas	Wichita	\$8.60	\$8.60	0.0%	\$8.98	4.4%	4.4%
Kentucky	Louisville	\$10.37	\$11.36	9.5%	\$11.46	0.9%	10.5%
Louisiana	Baton Rouge	\$13.37	\$13.37	0.0%	\$13.37	0.0%	0.0%
	New Orleans	\$16.53	\$16.53	0.0%	\$17.52	6.0%	6.0%
	Shreveport	\$9.50	\$12.35	30.0%	\$11.69	-5.3%	23.1%
Maryland	Baltimore	\$5.93	\$7.00	18.0%	\$7.00	0.0%	18.0%
Massachusetts	Boston	\$8.82	\$15.12	71.4%	\$16.74	10.7%	89.8%
	Salem	\$10.50	\$10.50	0.0%	\$10.50	0.0%	0.0%
	Springfield	\$7.33	\$10.90	48.7%	\$10.90	0.0%	48.7%
	Lawrence		\$13.50	N/A	\$13.50	0.0%	N/A
	Worcester		\$13.70	N/A	\$13.70	0.0%	N/A
Michigan	Ann Arbor	\$9.10	\$8.19	-10.0%	\$10.80	31.9%	18.7%
	Detroit	\$4.77	\$5.17	8.4%	\$6.93	34.0%	45.3%
	Flint	\$11.44	\$15.30	33.7%	\$17.50	14.4%	53.0%
	Grand Rapids		\$12.05	N/A	\$17.51	45.3%	N/A
	Lansing	\$12.85	\$12.60	-1.9%	\$14.75	17.1%	14.8%
	Saginaw	\$5.01	\$5.64	12.6%	\$4.63	-17.9%	-7.6%
Minnesota	Minneapolis	\$8.50	\$8.50	0.0%	\$8.50	0.0%	0.0%
	St. Paul	\$11.90	\$10.07	-15.4%	\$11.17	10.9%	-6.1%
Mississippi	Jackson	\$10.00	\$15.40	54.0%	\$15.40	0.0%	54.0%
	Kansas City	\$12.30	\$14.30	16.3%	\$15.50	8.4%	26.0%
	St. Louis	\$8.99	\$10.30	14.6%	\$10.30	0.0%	14.6%
Nebraska	Omaha	\$6.86	\$7.72	12.5%	\$7.85	1.7%	14.4%
Nevada	Las Vegas	\$14.12	\$14.12	0.0%	\$9.64	-31.7%	-31.7%
New Jersey	Jersey City	\$8.50	\$8.50	0.0%	\$14.10	65.9%	65.9%
	Newark	\$15.56	\$15.56	0.0%	\$15.13	-2.8%	-2.8%
	Trenton	\$6.50	\$6.50	0.0%	\$14.53	123.5%	123.5%
New Mexico	Albuquerque	\$8.70	\$10.39	19.4%	\$10.17	-2.1%	16.9%
New York	Albany	\$13.75	\$10.00	-27.3%	\$11.20	12.0%	-18.5%
	Buffalo	\$6.36	\$6.90	8.5%	\$7.97	15.5%	25.3%

Table I - continued

State	City	88 Water	90 Water	88 - 90 % age Incr	92 Water	90 - 92 % age Incr	88 - 92 Increase
North Carolina	New York City	\$8.10	\$9.50	17.3%	\$10.10	6.3%	24.7%
	Rochester	\$12.77		-100.0%	\$13.73	N/A	7.5%
	Syracuse	\$6.86	\$8.30	21.0%	\$9.14	10.1%	33.2%
	Charlotte	\$7.40	\$8.25	11.5%	\$9.10	10.3%	23.0%
	Greensboro	\$7.00	\$6.60	-5.7%	\$6.90	4.5%	-1.4%
Ohio	Raleigh	\$11.81	\$11.81	0.0%	\$11.81	0.0%	0.0%
	Akron	\$14.72	\$16.72	13.6%	\$16.72	0.0%	13.6%
	Canton	\$3.03	\$9.10	200.3%	\$9.10	0.0%	200.3%
	Cincinnati	\$6.78	\$9.06	33.6%	\$10.91	20.4%	60.9%
	Cleveland	\$6.23	\$6.23	0.0%	\$7.33	17.7%	17.7%
	Columbus	\$9.09	\$9.84	8.3%	\$9.85	0.1%	8.4%
	Dayton	\$3.66	\$3.66	0.0%	\$11.00	200.5%	200.5%
	Toledo	\$6.05	\$6.05	0.0%	\$6.05	0.0%	0.0%
Oklahoma	Youngstown	\$3.02	\$9.43	212.3%	\$12.55	33.1%	315.6%
	Oklahoma City	\$8.82	\$9.23	4.6%	\$11.53	24.9%	30.7%
	Tulsa	\$7.63	\$11.97	56.9%	\$12.26	2.4%	60.7%
Oregon	Portland	\$8.35	\$10.00	19.8%	\$11.28	12.8%	35.1%
Pennsylvania	Allentown	\$9.28	\$9.55	2.9%	\$12.56	31.5%	35.3%
	Lancaster	\$9.53	\$10.49	10.1%	\$11.20	6.8%	17.5%
	Harrisburg		\$5.94	N/A	\$6.04	1.7%	N/A
	Philadelphia	\$11.53	\$11.53	0.0%	\$11.53	0.0%	0.0%
	Pittsburgh	\$14.58	\$17.96	23.2%	\$21.76	21.2%	49.2%
Rhode Island	Scranton	\$16.17	\$19.43	20.2%	\$22.17	65.6%	98.8%
	Providence	\$4.29		-100.0%	\$5.71	N/A	33.1%
	Charleston	\$8.23	\$10.54	28.1%	\$10.70	1.5%	30.0%
South Carolina	Columbia	\$7.65	\$8.15	6.5%	\$8.15	0.0%	6.5%
	Greenville	\$6.58	\$6.58	0.0%	\$6.16	-6.4%	-6.4%
Tennessee	Chattanooga	\$15.89	\$17.14	7.9%	\$20.82	21.5%	31.0%
	Johnson City	\$16.77	\$17.63	5.1%	\$17.58	-0.3%	4.8%
	Knoxville	\$17.73	\$17.73	0.0%	\$17.73	0.0%	0.0%
	Memphis	\$5.62	\$6.58	17.1%	\$6.58	0.0%	17.1%
	Nashville	\$18.65	\$22.95	23.1%	\$24.30	5.9%	30.3%
Texas	Austin	\$17.19	\$17.84	3.8%	\$16.76	-6.1%	-2.5%
	Beaumont	\$10.80	\$12.10	12.0%	\$13.34	10.2%	23.5%
	Corpus Christi	\$10.85	\$11.13	2.6%	\$10.80	-3.0%	-0.5%
	Dallas	\$9.35	\$9.62	2.9%	\$10.03	4.3%	7.3%
	El Paso	\$5.89	\$5.89	0.0%	\$7.89	34.0%	34.0%
	Fort Worth	\$13.70	\$15.85	15.7%	\$15.85	0.0%	15.7%
	Houston	\$15.98	\$18.34	14.8%	\$19.38	5.7%	21.3%
	San Antonio	\$9.26	\$9.54	3.0%	\$10.20	6.9%	10.2%
Utah	Salt Lake City	\$5.42	\$6.45	19.0%	\$6.36	-1.4%	17.3%
Virginia	Norfolk	\$12.33	\$13.38	8.5%	\$13.90	3.9%	12.7%
Washington	Seattle	\$7.55	\$10.58	40.1%	\$13.00	22.9%	72.2%
	Spokane	\$7.53	\$8.47	12.5%	\$9.50	12.2%	26.2%
	Tacoma	\$9.41	\$11.64	23.7%	\$12.15	4.4%	29.1%
Wisconsin	Milwaukee	\$7.27	\$8.23	13.2%	\$10.75	30.6%	47.9%
Average		\$9.95	\$11.08	11.3%	\$12.36	11.6%	24.2%

Table II  
WATER AND SEWER BILLS FOR SSI HOUSEHOLD OF 1 PERSON

STATE	City	SSI Income for 1	4000 gallons Water	Percent Income on Water	4000 gallons Sewer	Percent Income on Sewer	Combined Water & Sewer	Percent Income on Combined
Alabama	Birmingham	\$407	\$8.31	2.04%	\$3.96	0.97%	\$12.27	3.01%
Alabama	Mobile	\$407	\$5.50	1.35%	\$9.23	2.27%	\$14.73	3.62%
Arizona	Phoenix	\$407	\$5.12	1.26%	\$4.50	1.11%	\$9.62	2.36%
Arizona	Tucson	\$407	\$9.75	2.40%	\$5.60	1.38%	\$15.35	3.77%
Arkansas	Little Rock	\$407	\$5.42	1.33%	\$7.25	1.78%	\$12.67	3.11%
California	Bakersfield	\$630	\$7.34	1.17%	\$8.50	1.35%	\$15.84	2.51%
California	Fresno	\$630	\$5.38	0.85%	\$5.51	0.87%	\$10.89	1.73%
California	Los Angeles	\$630	\$8.72	1.38%	\$5.23	0.83%	\$13.95	2.21%
California	Oakland	\$630	\$10.80	1.71%	\$6.78	1.08%	\$17.58	2.79%
California	Sacramento	\$630	\$10.37	1.65%	\$6.49	1.09%	\$17.24	2.74%
California	San Diego	\$630	\$8.50	1.35%	\$19.24	3.05%	\$27.74	4.40%
California	San Francisco	\$630	\$6.80	1.08%	\$10.20	1.62%	\$17.00	2.70%
California	San Jose	\$630	\$10.08	1.60%	\$15.30	2.43%	\$25.38	4.03%
California	Stockton	\$630	\$8.69	1.38%	\$12.99	2.06%	\$21.68	3.44%
California	Venture	\$630	\$7.35	1.17%	\$14.41	2.29%	\$21.76	3.45%
Colorado	Colorado Springs	\$465	\$9.67	2.08%	\$9.35	2.01%	\$19.02	4.09%
Colorado	Denver	\$465	\$4.98	1.07%	\$4.18	0.90%	\$9.16	1.97%
Connecticut	Bridgeport	\$766	\$17.24	2.25%	\$9.75	1.27%	\$26.99	3.52%
Connecticut	Hartford	\$766	\$7.21	0.94%	\$0.00	0.00%	\$7.21	0.94%
Connecticut	New Haven	\$766	\$16.46	2.15%	\$9.73	1.27%	\$26.19	3.42%
DC	Washington	\$422	\$5.02	1.19%	\$9.32	2.21%	\$14.34	3.40%
Delaware	Wilmington	\$407	\$4.84	1.19%	\$7.45	1.83%	\$12.29	3.02%
Florida	Fort Lauderdale	\$407	\$7.80	1.92%	\$9.18	2.26%	\$16.98	4.17%
Florida	Jacksonville	\$407	\$5.54	1.36%	\$8.00	2.16%	\$14.34	3.52%
Florida	Lakeland	\$407	\$4.80	1.18%	\$11.59	2.85%	\$16.39	4.03%
Florida	Miami	\$407	\$4.50	1.11%	\$6.47	1.59%	\$10.97	2.70%
Florida	Orlando	\$407	\$4.51	1.11%	\$18.12	4.45%	\$22.63	5.56%
Florida	St. Petersburg	\$407	\$8.94	2.20%	\$11.07	2.72%	\$20.01	4.92%
Florida	Tampa	\$407	\$3.45	0.85%	\$9.40	2.31%	\$13.25	3.26%
Florida	Palm Beach County	\$407	\$8.10	1.99%	\$11.75	2.89%	\$19.85	4.88%
Georgia	Atlanta	\$407	\$6.75	1.66%	\$6.00	1.47%	\$12.75	3.13%
Georgia	Augusta	\$407	\$3.84	0.94%	\$4.85	1.19%	\$8.69	2.14%
Hawaii	Honolulu	\$412	\$7.21	1.75%	\$21.23	5.15%	\$28.44	6.90%
Illinois	Chicago*	\$407	\$8.01	2.16%	\$6.87	1.69%	\$15.68	3.85%
Illinois	Joliet*	\$407	\$11.82	2.90%	\$11.75	2.89%	\$23.57	5.79%
Indiana	Fort Wayne	\$407	\$8.58	2.11%	\$2.76	0.92%	\$12.34	3.03%
Indiana	Gary	\$407	\$9.30	2.29%	\$6.80	1.67%	\$16.10	3.96%
Indiana	Indianapolis	\$407	\$8.75	2.15%	\$6.28	1.54%	\$15.03	3.69%
Iowa	Davenport	\$407	\$12.70	3.12%	\$8.32	2.04%	\$21.02	5.16%
Iowa	Des Moines	\$407	\$7.68	1.89%	\$9.16	2.25%	\$16.84	4.14%
Kansas	Wichita	\$407	\$5.80	1.43%	\$6.16	1.51%	\$11.96	2.94%
Kentucky	Louisville	\$407	\$7.69	1.89%	\$7.76	1.91%	\$15.45	3.80%
Louisiana	Baton Rouge	\$407	\$8.98	2.21%	\$6.66	1.64%	\$15.64	3.84%
Louisiana	New Orleans	\$407	\$11.34	2.79%	\$9.88	2.43%	\$21.22	5.21%
Louisiana	Shreveport	\$407	\$7.50	1.86%	\$6.89	1.69%	\$14.47	3.56%
Maryland	Baltimore	\$407	\$2.50	0.66%	\$4.96	1.22%	\$8.46	2.08%
Massachusetts	Boston	\$536	\$8.36	1.56%	\$11.17	2.08%	\$19.53	3.64%
Massachusetts	Lawrence	\$536	\$6.75	1.26%	\$7.00	1.31%	\$13.75	2.57%
Massachusetts	Salem	\$536	\$10.50	1.96%	\$6.45	1.20%	\$16.95	3.16%
Massachusetts	Springfield	\$536	\$5.45	1.02%	\$5.45	1.02%	\$10.90	2.03%
Massachusetts	Worcester	\$536	\$6.85	1.28%	\$5.28	0.99%	\$12.13	2.26%
Michigan	Ann Arbor	\$438	\$5.40	1.23%	\$9.60	2.19%	\$15.00	3.42%
Michigan	Detroit	\$438	\$4.06	0.93%	\$7.52	1.72%	\$11.58	2.64%
Michigan	Flint	\$438	\$10.70	2.44%	\$14.59	3.33%	\$25.29	5.77%
Michigan	Grand Rapids	\$438	\$12.51	2.86%	\$8.02	1.83%	\$20.53	4.69%
Michigan	Lansing	\$438	\$9.50	2.17%	\$11.96	2.73%	\$21.46	4.90%
Michigan	Saginaw	\$438	\$3.43	0.78%	\$8.95	2.04%	\$12.38	2.83%
Minnesota	Minneapolis	\$488	\$4.25	0.87%	\$7.75	1.59%	\$12.00	2.46%
Minnesota	St. Paul	\$488	\$6.12	1.25%	\$8.50	1.74%	\$14.62	3.00%
Mississippi	Jackson	\$407	\$10.20	2.51%	\$6.45	1.58%	\$16.65	4.09%
Missouri	Kansas City	\$407	\$10.30	2.53%	\$4.65	1.14%	\$14.95	3.67%
Missouri	St. Louis	\$407	\$6.75	1.66%	\$10.68	2.62%	\$17.43	4.28%
Nebraska	Omaha	\$431	\$4.95	1.15%	\$7.72	1.79%	\$12.67	2.94%
Nevada	Las Vegas	\$443	\$6.91	1.56%	\$9.94	2.24%	\$16.85	3.80%

Table II (continued)  
WATER AND SEWER BILLS FOR SSI HOUSEHOLD OF 1 PERSON

STATE	City	SSI Income for 1	4000 gallons Water	Percent Income on Water	4000 gallons Sewer	Percent Income on Sewer	Combined Water & Sewer	Percent Income on Combined
New Jersey	Jersey City	\$438	\$7.55	1.72%	\$7.50	1.71%	\$15.05	3.44%
New Jersey	Newark	\$438	\$7.57	1.73%	\$9.61	2.06%	\$17.18	3.79%
New Jersey	Trenton	\$438	\$10.45	2.37%	\$13.74	2.93%	\$24.19	5.30%
New Mexico	Albuquerque	\$407	\$7.42	1.82%	\$7.78	1.93%	\$15.20	3.73%
New York	Albany	\$433	\$2.75	0.76%	\$2.75	0.76%	\$7.50	1.52%
New York	Buffalo	\$433	\$7.57	1.72%	\$9.68	2.06%	\$17.25	3.80%
New York	New York City	\$432	\$5.05	1.02%	\$4.87	1.09%	\$11.92	2.82%
New York	Rochester	\$433	\$8.36	1.82%	\$4.40	0.92%	\$12.56	2.75%
New York	Syracuse	\$433	\$8.57	0.93%	\$1.43	0.31%	\$6.04	1.23%
North Carolina	Charlotte	\$407	\$5.10	1.20%	\$7.00	1.72%	\$12.30	3.02%
North Carolina	Greensboro	\$407	\$3.45	0.85%	\$4.50	1.13%	\$7.95	1.95%
North Carolina	Raleigh	\$407	\$6.61	1.62%	\$5.28	1.30%	\$11.89	2.92%
Ohio	Akron	\$407	\$9.37	2.20%	\$9.49	2.22%	\$18.86	4.32%
Ohio	Canton	\$407	\$4.55	1.12%	\$2.82	0.59%	\$4.97	1.71%
Ohio	Cincinnati	\$407	\$4.14	1.51%	\$10.28	2.55%	\$14.54	4.06%
Ohio	Cleveland	\$407	\$3.13	0.77%	\$5.20	1.30%	\$8.43	2.07%
Ohio	Columbus	\$407	\$4.42	1.50%	\$7.78	1.90%	\$12.14	3.18%
Ohio	Dayton	\$407	\$5.98	1.47%	\$7.20	1.77%	\$13.18	3.24%
Ohio	Toledo	\$407	\$4.03	0.99%	\$6.23	2.02%	\$12.26	3.03%
Ohio	Toungstown	\$407	\$4.66	1.62%	\$10.42	2.41%	\$17.22	4.22%
Oklahoma	Oklahoma City	\$471	\$7.81	1.66%	\$8.64	1.83%	\$16.45	3.49%
Oklahoma	Tulsa	\$471	\$8.72	1.85%	\$8.20	1.74%	\$16.92	3.59%
Oregon	Portland	\$409	\$7.53	1.88%	\$10.13	2.68%	\$17.66	4.32%
Pennsylvania	Allentown	\$439	\$8.47	1.97%	\$4.84	0.92%	\$13.72	3.00%
Pennsylvania	Harrisburg	\$439	\$3.60	0.82%	\$8.04	1.83%	\$11.44	2.65%
Pennsylvania	Lancaster	\$439	\$6.40	1.46%	\$4.94	1.59%	\$13.26	3.04%
Pennsylvania	Philadelphia	\$439	\$6.81	1.55%	\$21.15	4.82%	\$27.96	6.27%
Pennsylvania	Pittsburgh	\$439	\$18.43	2.32%	\$2.70	0.84%	\$18.33	4.18%
Pennsylvania	Scranton	\$439	\$5.71	2.11%	\$7.48	1.70%	\$17.19	3.92%
Pennsylvania	York	\$439	\$12.92	2.94%	\$10.92	2.49%	\$23.84	5.47%
Rhode Island	Providence	\$471	\$3.44	0.76%	\$5.42	1.15%	\$9.08	1.92%
South Carolina	Charleston	\$407	\$6.70	1.65%	\$13.77	2.38%	\$20.47	5.02%
South Car	Columbia	\$407	\$4.15	1.02%	\$4.20	2.01%	\$13.35	3.02%
South Car	Greenville	\$407	\$3.52	0.86%	\$9.22	2.22%	\$12.85	3.16%
Tennessee	Chattanooga	\$407	\$10.92	2.68%	\$11.44	2.66%	\$22.46	5.52%
Tennessee	Johnson City	\$407	\$11.22	2.76%	\$11.22	2.76%	\$22.44	5.51%
Tennessee	Knoxville	\$407	\$9.53	2.28%	\$12.29	2.27%	\$22.82	5.41%
Tennessee	Memphis	\$407	\$3.25	0.81%	\$2.35	0.58%	\$5.44	1.29%
Tennessee	Nashville	\$407	\$11.65	2.86%	\$11.45	2.84%	\$23.30	5.72%
Texas	Austin	\$407	\$9.98	2.45%	\$12.77	2.84%	\$22.75	5.59%
Texas	Beaumont	\$407	\$9.02	2.22%	\$7.14	1.75%	\$16.14	3.97%
Texas	Corpus Christi	\$407	\$4.54	1.11%	\$9.88	2.42%	\$14.44	4.04%
Texas	Dallas	\$407	\$5.29	1.30%	\$11.73	2.88%	\$17.02	4.18%
Texas	El Paso	\$407	\$4.09	1.00%	\$5.25	1.29%	\$9.26	2.29%
Texas	Fort Worth	\$407	\$9.45	2.32%	\$6.95	2.17%	\$16.30	4.50%
Texas	Houston	\$407	\$12.40	2.90%	\$11.12	2.72%	\$23.72	5.82%
Texas	San Antonio	\$407	\$7.20	1.77%	\$8.16	2.00%	\$15.24	3.77%
Utah	Salt Lake City	\$413	\$6.34	1.58%	\$3.15	0.76%	\$9.51	2.30%
Virginia	Borfolk	\$407	\$9.02	1.97%	\$6.80	1.68%	\$15.82	3.15%
Washington	Seattle	\$435	\$4.04	1.39%	\$12.45	2.91%	\$16.49	4.30%
Washington	Spokane	\$435	\$7.10	1.66%	\$12.56	2.89%	\$19.76	4.54%
Washington	Yacoma	\$435	\$9.30	2.14%	\$12.41	3.06%	\$22.71	5.22%
Wisconsin	Milwaukee	\$510	\$7.00	1.37%	\$5.13	1.02%	\$12.13	2.39%
Average			\$7.64		\$6.53			

Water and Sewer bills as of 1/1/52.  
Maximum SSI payment as of 1/1/91.

\*In Illinois SSI benefits are decided on a case by case basis

Information on benefit levels is from: Committee on Ways and Means, U.S. House of Representatives, Overview of Entitlement Programs, 1991 Green Book (May 7, 1991); at 743 for SSI benefit levels; information on water and sewer rates is from: Ernst & Young, Water & Wastewater - 1992 Rate Survey (1992).

Table III  
 WATER AND SEWER BILLS FOR AFDC FAMILIES OF FOUR

STATE	City	AFDC For 4 people	7000 gallons of Water	Percent Income on Water	7000 gallons of Sewer	Percent Income on Sewer	Combined Water & Sewer	Percent Income on Combined
Alabama	Birmingham	\$155	\$12.66	8.17%	\$8.13	5.25%	\$20.79	13.41%
Alabama	Mobile	\$155	\$9.74	6.28%	\$16.31	10.52%	\$26.05	16.81%
Arizona	Phoenix	\$155	\$8.72	5.63%	\$7.17	4.63%	\$15.89	10.25%
Arizona	Tucson	\$155	\$16.20	4.59%	\$9.30	2.63%	\$25.50	7.22%
Arkansas	Little Rock	\$247	\$9.52	3.85%	\$12.55	5.08%	\$22.07	8.94%
California	Bakersfield	\$824	\$9.39	1.14%	\$8.50	1.03%	\$17.89	2.17%
California	Fresno	\$824	\$6.88	0.83%	\$5.51	0.67%	\$12.39	1.50%
California	Los Angeles	\$824	\$14.85	1.80%	\$10.45	1.27%	\$25.30	3.07%
California	Oakland	\$824	\$16.05	1.95%	\$8.14	0.99%	\$24.19	2.94%
California	Sacramento	\$824	\$10.37	1.26%	\$6.89	0.84%	\$17.26	2.09%
California	San Diego	\$824	\$13.88	1.68%	\$19.24	2.33%	\$33.12	4.02%
California	San Francisco	\$824	\$11.50	1.40%	\$25.86	3.14%	\$37.36	4.53%
California	San Jose	\$824	\$16.76	2.03%	\$15.30	1.86%	\$32.06	3.89%
California	Stockton	\$824	\$10.45	1.27%	\$12.99	1.58%	\$23.44	2.84%
California	Ventura	\$824	\$13.35	1.62%	\$19.18	2.33%	\$32.53	3.95%
Colorado	Colorado Springs	\$432	\$16.59	3.84%	\$11.80	2.73%	\$28.39	6.57%
Colorado	Denver	\$432	\$7.12	1.65%	\$10.71	2.46%	\$17.83	4.13%
Connecticut	Bridgeport	\$792	\$25.58	3.23%	\$19.50	2.46%	\$45.08	5.69%
Connecticut	Hartford	\$792	\$12.16	1.54%	\$8.00	0.00%	\$12.16	1.54%
Connecticut	New Haven	\$792	\$25.24	3.19%	\$17.13	2.16%	\$42.37	5.35%
DC	Washington	\$522	\$10.04	1.92%	\$18.64	3.57%	\$28.68	5.49%
Delaware	Wilmington	\$407	\$8.01	1.97%	\$12.33	3.03%	\$20.34	5.00%
Florida	Fort Lauderdale	\$346	\$11.40	3.29%	\$14.73	4.26%	\$26.13	7.55%
Florida	Jacksonville	\$346	\$8.20	2.37%	\$26.30	7.60%	\$34.50	9.97%
Florida	Lakeland	\$346	\$7.34	2.12%	\$15.61	4.51%	\$22.95	6.63%
Florida	Miami	\$346	\$9.57	2.77%	\$10.85	3.14%	\$20.42	5.90%
Florida	Orlando	\$346	\$6.14	1.77%	\$23.64	6.83%	\$29.78	8.61%
Florida	St. Petersburg	\$346	\$12.42	3.59%	\$16.23	4.69%	\$28.65	8.28%
Florida	Tampa	\$346	\$7.70	2.23%	\$18.80	5.43%	\$26.50	7.66%
Florida	Palm Beach County	\$346	\$11.70	3.38%	\$17.30	5.00%	\$29.00	8.38%
Georgia	Atlanta	\$330	\$15.25	4.62%	\$12.00	3.64%	\$27.25	8.26%
Georgia	Augusta	\$330	\$6.72	2.04%	\$6.14	1.86%	\$12.86	3.90%
Hawaii	Honolulu	\$760	\$11.23	1.48%	\$23.25	3.06%	\$34.48	4.54%
Illinois	Chicago	\$414	\$8.01	2.13%	\$6.87	1.66%	\$15.88	3.79%
Illinois	Joliet	\$414	\$24.12	5.83%	\$11.75	2.84%	\$35.87	8.66%
Indiana	Fort Wayne	\$346	\$12.84	3.71%	\$7.52	2.18%	\$20.37	5.89%
Indiana	Gary	\$346	\$15.33	4.43%	\$11.90	3.44%	\$27.23	7.87%
Indiana	Indianapolis	\$346	\$13.80	3.99%	\$10.53	3.04%	\$24.33	7.03%
Iowa	Davenport	\$495	\$20.90	4.22%	\$14.97	3.02%	\$35.87	7.25%
Iowa	Des Moines	\$495	\$13.45	2.72%	\$14.53	2.94%	\$27.98	5.65%
Kansas	Wichita	\$470	\$8.98	1.91%	\$8.44	1.80%	\$17.42	3.71%
Kentucky	Louisville	\$285	\$11.46	4.02%	\$10.97	3.85%	\$22.43	7.87%
Louisiana	Baton Rouge	\$234	\$13.37	5.71%	\$11.76	5.03%	\$25.13	10.74%
Louisiana	New Orleans	\$234	\$17.52	7.49%	\$13.10	5.60%	\$30.62	13.09%
Louisiana	Shreveport	\$234	\$11.69	5.00%	\$10.85	4.64%	\$22.54	9.63%
Maryland	Baltimore	\$489	\$7.00	1.43%	\$9.92	2.03%	\$16.92	3.46%
Massachusetts	Boston	\$628	\$16.74	2.67%	\$22.44	3.57%	\$39.18	6.24%
Massachusetts	Lawrence	\$628	\$13.50	2.15%	\$14.00	2.23%	\$27.50	4.38%
Massachusetts	Salem	\$628	\$10.50	1.67%	\$12.90	2.05%	\$23.40	3.73%
Massachusetts	Springfield	\$628	\$10.90	1.74%	\$10.90	1.74%	\$21.80	3.47%
Massachusetts	Worcester	\$628	\$13.70	2.18%	\$10.56	1.68%	\$24.26	3.86%
Michigan	Ann Arbor	\$665	\$10.80	1.62%	\$19.20	2.89%	\$30.00	4.51%
Michigan	Detroit	\$665	\$6.93	1.09%	\$10.96	1.73%	\$17.89	2.82%
Michigan	Flint	\$665	\$17.50	2.63%	\$20.94	3.15%	\$38.44	5.78%
Michigan	Grand Rapids*	\$665	\$17.51	2.63%	\$11.62	1.75%	\$29.13	4.38%
Michigan	Lansing*	\$665	\$14.75	2.22%	\$20.71	3.11%	\$35.46	5.33%
Michigan	Saginaw*	\$665	\$4.63	0.70%	\$12.10	1.82%	\$16.73	2.52%
Minnesota	Minneapolis	\$621	\$8.50	1.37%	\$15.50	2.50%	\$24.00	3.86%
Minnesota	St. Paul	\$621	\$11.17	1.80%	\$17.00	2.74%	\$28.17	4.54%
Mississippi	Jackson	\$144	\$15.40	10.69%	\$12.90	8.96%	\$28.30	19.65%
Missouri	Kansas City	\$342	\$15.50	4.53%	\$7.20	2.11%	\$22.70	6.64%
Missouri	St. Louis	\$342	\$10.30	3.01%	\$10.69	3.12%	\$20.99	6.13%
Nebraska	Omaha	\$435	\$7.05	1.80%	\$10.34	2.38%	\$18.19	4.18%
Nevada	Las Vegas	\$390	\$9.64	2.47%	\$9.94	2.55%	\$19.58	5.02%
New Jersey	Jersey City	\$488	\$14.10	2.89%	\$15.00	3.07%	\$29.10	5.96%
New Jersey	Newark	\$488	\$15.13	3.10%	\$13.51	2.77%	\$28.64	5.87%
New Jersey	Trantion	\$488	\$14.53	2.98%	\$24.09	4.94%	\$38.62	7.91%
New Mexico	Albuquerque	\$373	\$10.17	2.73%	\$10.34	2.77%	\$20.51	5.50%

Table III (continued)  
WATER AND SEWER BILLS FOR AFDC FAMILIES OF FOUR

STATE	City	AFDC For 4 people	7000 gallons of Water	Percent Income on Water	7000 gallons of Sewer	Percent Income on Sewer	Combined Water & Sewer	Percent Income on Combined
New York	Albany*	\$687	\$11.20	1.63%	\$11.20	1.63%	\$22.40	3.26%
New York	Buffalo*	\$687	\$7.97	1.16%	\$9.08	1.32%	\$17.05	2.48%
New York	New York City	\$687	\$10.10	1.47%	\$13.74	2.00%	\$23.84	3.47%
New York	Rochester*	\$687	\$13.73	2.00%	\$8.05	1.17%	\$21.78	3.17%
New York	Syracuse*	\$687	\$9.14	1.33%	\$2.97	0.43%	\$12.11	1.76%
North Carolina	Charlotte	\$297	\$9.10	3.06%	\$12.50	4.23%	\$21.60	7.27%
North Carolina	Greensboro	\$297	\$6.90	2.32%	\$9.00	3.03%	\$15.90	5.35%
North Carolina	Raleigh	\$297	\$11.81	3.98%	\$9.58	3.23%	\$21.39	7.20%
Ohio	Akron	\$413	\$16.72	4.05%	\$17.49	4.33%	\$34.61	8.38%
Ohio	Canton	\$413	\$9.10	2.20%	\$9.17	2.22%	\$18.27	4.42%
Ohio	Cincinnati	\$413	\$10.91	2.64%	\$16.33	3.95%	\$27.24	6.60%
Ohio	Cleveland	\$413	\$7.33	1.77%	\$10.60	2.57%	\$17.93	4.34%
Ohio	Columbus	\$413	\$9.85	2.38%	\$13.18	3.19%	\$23.03	5.58%
Ohio	Dayton	\$413	\$11.00	2.66%	\$10.94	2.65%	\$21.94	5.31%
Ohio	Toledo	\$413	\$6.05	1.46%	\$13.49	3.27%	\$19.54	4.73%
Ohio	Youngstown	\$413	\$12.55	3.04%	\$16.14	3.92%	\$28.73	6.96%
Oklahoma	Oklahoma City	\$423	\$11.53	2.73%	\$15.12	3.57%	\$26.65	6.30%
Oklahoma	Tulsa	\$423	\$12.26	2.90%	\$12.43	2.94%	\$24.69	5.84%
Oregon	Portland	\$541	\$11.28	2.09%	\$10.13	1.87%	\$21.41	3.96%
Pennsylvania	Allentown	\$514	\$12.56	2.44%	\$6.27	1.22%	\$18.83	3.66%
Pennsylvania	Harrisburg	\$514	\$6.04	1.18%	\$16.09	3.13%	\$22.13	4.31%
Pennsylvania	Lancaster	\$514	\$11.20	2.18%	\$12.18	2.37%	\$23.38	4.55%
Pennsylvania	Philadelphia	\$514	\$11.53	2.24%	\$27.07	5.27%	\$38.60	7.51%
Pennsylvania	Pittsburgh	\$514	\$21.76	4.23%	\$6.10	1.19%	\$27.86	5.42%
Pennsylvania	Scranton	\$514	\$32.17	6.26%	\$13.09	2.55%	\$45.26	8.81%
Pennsylvania	York	\$514	\$18.95	3.69%	\$19.11	3.72%	\$38.06	7.40%
Rhode Island	Providence	\$632	\$5.71	0.90%	\$8.26	1.31%	\$13.97	2.21%
South Carolina	Charleston	\$252	\$10.70	4.25%	\$28.93	11.48%	\$39.63	15.73%
South Car	Columbia	\$252	\$8.15	3.23%	\$14.15	5.62%	\$22.30	8.85%
South Car	Greenville	\$252	\$6.16	2.44%	\$16.55	6.57%	\$22.71	9.01%
Tennessee	Chattanooga	\$238	\$20.82	8.75%	\$21.77	9.15%	\$42.59	17.89%
Tennessee	Johnson City	\$238	\$17.58	7.39%	\$17.58	7.39%	\$35.16	14.77%
Tennessee	Knoxville	\$238	\$17.73	7.45%	\$23.14	9.72%	\$40.87	17.27%
Tennessee	Memphis	\$238	\$6.58	2.76%	\$4.11	1.73%	\$10.69	4.49%
Tennessee	Nashville	\$238	\$24.30	10.21%	\$24.30	10.21%	\$48.60	20.42%
Texas	Austin	\$221	\$16.76	7.58%	\$23.51	10.64%	\$40.27	18.22%
Texas	Beaumont	\$221	\$13.34	6.04%	\$11.28	5.10%	\$24.62	11.14%
Texas	Corpus Christi	\$221	\$10.80	4.89%	\$13.48	6.10%	\$24.28	10.99%
Texas	Dallas	\$221	\$10.03	4.54%	\$19.29	8.73%	\$29.32	13.27%
Texas	El Paso	\$221	\$7.89	3.57%	\$8.04	3.64%	\$15.93	7.21%
Texas	Fort Worth	\$221	\$15.85	7.17%	\$13.20	5.97%	\$29.05	13.14%
Texas	Houston	\$221	\$19.38	8.77%	\$19.46	8.81%	\$38.84	17.57%
Texas	San Antonio	\$221	\$10.20	4.62%	\$13.26	6.00%	\$23.46	10.62%
Utah	Salt Lake City	\$470	\$6.26	1.35%	\$8.00	1.70%	\$14.26	3.06%
Virginia	Norfolk	\$410	\$13.90	3.39%	\$9.60	2.34%	\$23.50	5.73%
Washington	Seattle	\$624	\$13.00	2.08%	\$26.30	4.21%	\$39.30	6.30%
Washington	Spokane	\$624	\$9.50	1.52%	\$12.56	2.01%	\$22.06	3.54%
Washington	Tacoma	\$624	\$12.15	1.95%	\$20.61	3.30%	\$32.76	5.25%
Wisconsin	Milwaukee	\$617	\$10.75	1.74%	\$7.34	1.19%	\$18.09	2.93%
	Average		\$12.35		\$13.81		\$26.16	

Water and Sewer bills as of 1/1/92.  
Maximum AFDC payment as of 1/1/91.

\* Michigan has different AFDC rates in different counties; the rates provided for these cities  
 \* New York has different AFDC rates in different counties; the rates provided for these cities

Information on benefit levels is from: Committee on Ways and Means, U.S. House of Representatives, *Overview of Entitlement Programs, 1991 Green Book* (May 7, 1991); at 599 for AFDC benefit levels; Information on water and sewer rates is from: Ernst & Young, *Water & Wastewater - 1992 Rate Survey* (1992).



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**GAO****United States General Accounting Office**

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Report to the Chairman, Environment,  
Energy, and Natural Resources  
Subcommittee, Committee on  
Government Operations, House of  
Representatives

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**March 1994**

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# DRINKING WATER

## Stronger Efforts Essential for Small Communities to Comply With Standards



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## Executive Summary

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### Purpose

In July 1992, GAO reported that a vast gap exists between the resources available and the funds needed to fully implement the Environmental Protection Agency's (EPA) drinking water program.<sup>1</sup> The problem is particularly acute for the approximately 50,000 small community drinking water systems that, in fiscal year 1991, accounted for 90 percent of all the community systems in violation of drinking water standards.

Given this difficult situation, the Chairman, Environment, Energy, and Natural Resources Subcommittee, House Committee on Government Operations, requested that GAO determine (1) what cost-effective and alternative management- and technology-based approaches are being used to improve small water systems' compliance with drinking water regulations, (2) what barriers prevent the effective use of these approaches, and (3) what EPA is doing to remove any existing barriers and promote alternative approaches at the national level.

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### Background

To protect the public from the risks of contaminated drinking water, the Congress enacted the Safe Drinking Water Act in 1974. This act requires EPA to, among other things, establish (1) drinking water standards or treatment techniques for contaminants that adversely affect human health and (2) requirements for monitoring the quality of drinking water supplies and ensuring the proper operation and maintenance of public water systems. All states but one have the responsibility, or "primacy," for managing their drinking water programs. These states receive grants from EPA to help pay for the oversight of water systems and for other program responsibilities.

In 1986, the Congress amended the act to increase the number of regulated contaminants and to strengthen EPA's enforcement authority. To implement these amendments, EPA issued new regulations that significantly increase the responsibilities involved in drinking water programs. As a result, small water systems—which make up 87 percent of all community drinking water systems—are expected to incur enormous costs and face difficult challenges in complying with these requirements. According to EPA's estimates, through the end of this century small systems will incur costs of nearly \$3 billion to comply with all regulations and an additional \$20 billion to repair, replace, and expand the basic infrastructure to deliver drinking water.

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<sup>1</sup>Drinking Water: Widening Gap Between Needs and Available Resources Threatens Vital EPA Program (GAO/RCED-92-184, July 6, 1992).

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## Results in Brief

States are experimenting with a variety of alternative strategies to improve small water systems' compliance with the Safe Drinking Water Act. These strategies include (1) exploring whether alternative technologies can effectively treat drinking water at a cost affordable to small systems, (2) testing creative ways to provide technical and financial assistance to small systems, and (3) exploring options for restructuring small systems, such as consolidating nonviable small systems with viable systems.

A number of barriers prevent the wider use of alternative strategies. Cost and performance data that the states need to assess alternative treatment technologies are not widely available, and some treatment technologies are too complex and costly for small systems to use. Also, the limited efforts EPA and the states have made to increase technical assistance have generally been ineffective, in large part because of the vast number of small systems that need support. In addition, many states lack the resources needed to identify nonviable water systems and ensure that they are brought into long-term compliance with drinking water standards. Finally, although EPA favors consolidating nonviable systems, the agency's grant formula for providing states with funds to oversee compliance can provide a disincentive to consolidation.

To address some of these barriers, EPA has helped field test some alternative drinking water technologies and has made some efforts to improve the technical and managerial capabilities of the states and individual water systems. EPA has also recommended that the Congress amend the Safe Drinking Water Act to require states to develop viability programs. However, EPA's current priorities for the drinking water program do not emphasize the development of such programs. In addition, state and local officials told GAO that (1) EPA's initiatives are too limited to help significantly and (2) states will not have adequate funding to implement viability programs properly.

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## Principal Findings

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### Alternative Approaches Are Being Used to Help Small Systems

States are experimenting with technology- and management-based approaches to help small community drinking water systems comply with the requirements of the Safe Drinking Water Act. For example, affordable alternative technologies, such as pre-engineered packaged treatment plants, are sometimes being used to remove contaminants.

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Executive Summary

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Management-based strategies include creative approaches for providing technical and financial assistance to small systems. Several public and private organizations provide free on-site technical services to these systems. Private, state, and federal financial assistance programs have also been created for these systems. For example, the Rural Development Administration awards grants and low-interest loans to finance the construction of small community water systems.

Many state and EPA officials agree, however, that the most fundamental long-term solution is to address the small systems' lack of economies of scale. Connecticut, Pennsylvania, and Washington have adopted viability programs to (1) prevent potentially nonviable new systems from forming and (2) improve the viability of existing systems through laws that direct the restructuring of nonviable water systems.

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**Several Factors Impede  
Wider Use of Alternative  
Strategies**

One key barrier preventing the wider use of alternative treatment technologies is a lack of reliable cost and performance data, making it difficult for small systems' officials and state regulators to evaluate whether the technologies are affordable and will meet regulatory requirements. In addition, many state regulators told GAO that some of the available alternative technologies are too complex for many small systems' operators to properly operate and maintain.

Several barriers also limit the effectiveness of the technical and financial assistance programs established by states and other organizations. The sheer number of systems needing such assistance overwhelms available resources. Also, some state and industry officials maintain that the assistance programs, if not appropriately targeted, can inadvertently perpetuate systems that will eventually fail anyway.

Perhaps most important, few states have been able to reduce the number of their nonviable systems. State officials acknowledge that such reductions could help achieve meaningful resource savings. However, they stress that they cannot develop and implement viability programs because they are using all available resources to address other priorities that EPA deems necessary if they are to retain primacy for the program. Furthermore, although EPA supports the consolidation of nonviable water systems, its drinking water grant formula—which is based, in part, on the number of water systems in a state—inadvertently penalizes states that consolidate their water systems.

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### EPA Has Tried to Reduce Barriers to Alternative Strategies

EPA's efforts to remove the barriers to alternative strategies have included, among other things, (1) field tests of new treatment technologies and (2) limited training and outreach programs to improve the technical and managerial capabilities of both the states and their systems. To help remove disincentives to consolidation, in fiscal year 1994 only, EPA revised its method for allocating state grants. In addition, EPA has proposed that the Congress require states to have, as a condition of retaining primacy, both small system viability programs and the authority to restructure nonviable water systems. The agency has also proposed a federally authorized user fee to generate the funding needed to pay for these programs.

GAO acknowledges EPA's progress in addressing technological and managerial issues, particularly in light of the agency's serious budget constraints, and agrees with the agency that the states should develop viability programs and acquire the authority needed to restructure nonviable systems. However, a number of problems still need to be addressed to ensure the success of these restructuring efforts. Specifically, EPA has yet to (1) revise the priorities of its own drinking water program to place greater emphasis on developing and implementing viability programs or (2) work with the Congress to ensure that the proposed requirement that states develop viability programs is accompanied by a detailed and realistic funding strategy for implementation. Finally, EPA has not yet made long-term changes to its grant formula to remove disincentives for consolidating water systems.

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### Recommendations

GAO recommends that the Administrator, EPA, (1) revise the agency's drinking water program's priorities to place greater emphasis on developing and implementing viability programs, (2) work with the cognizant committees of the Congress to develop a detailed funding strategy to accompany the agency's proposed requirement that states develop viability programs for small systems, and (3) revise its grant formula for public water supply supervision to remove disincentives for states to consolidate water systems.

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### Agency Comments

GAO discussed the facts in this report with EPA officials from the Office of Ground Water and Drinking Water, who generally agreed with their accuracy. GAO has made changes where appropriate. As requested, GAO did not obtain written comments on the draft report.







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